VOL. XIX. NO. 47.

CLEVELAND-NOVEMBER 19, 1896-CHICAGO.

\$2 PER YEAR, 100, SINGLE COPY

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping office and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

J. J. H. Brown,

VICE PRESIDENTS. C. A. Eddy, Cleveland. H. H. Brown, W. Millen, G. G. Hadley, Detroit James McBrier, W. P. Herry, Bufialo. Erie. Conrad Starke, J. G. Kt:, Chicago. Mitwaukee. G. A. Tomlinson, Duluth. F. J. Firth, Philadelphia. Ogdensburg. Frank Owen

SECRETARY.

CHARLES H. KEEP. Buffalo, N. Y. TREASURER.

GEORGE P. McKAY,
COUNSEL.

Cleveland, O.

Buffalo, N. Y.

HARVEY D. GOULDER.

Cleveland. O.

CANALIZING.

The order of the day is to obtain, wherever possible, transportation of cargo and passengers by water; and more especially, perhaps, of the former, as passengers are not unfrequently tied to time. In this connection we find that nearly 300 business men were present at the opening meeting of the Ohio Valley Improvement Association last week at Pittsburg. Following the address of we'come by President Bindley, of the Pittsburg Chamber of Commerce, Hon. John L. Vance, of Gallipolis, O, president of the association, responded and then presented his report, reviewing the congressional appropriations made for improving the Ohio River and its tributaries. President Vance also gave an interesting account of the progress of Maj. Heuer, United States engineer, who is in charge of the survey corps in execution of the preliminary provisions of the law.

One of the chief topics of discussion was the extension of the ship canal project from Lake Erie to the Ohio River. The necessity for speedy action was embodied in a resolution which will be presented to Congress in the form of a memorial.

The project of a waterway from Lake Erie to Pittsburg is not so very far-fetched as would appear to many novices, and we feel assured, that at no distant date, a deep water canal, or other outlet, will be found from the lakes to the coast. As regards Pittsburg, it is in the same, or a similar position, that Manchester bore to the coast, and although the Manchester Ship Canal cost a large sum of money, a London letter to the New York Evening Post indicates that it was worth all it cost the business men of Manchester, even if the stock for which they paid £10 is quoted only at 25 shillings, and they are taxed a shilling and twopence to the pound to pay interest charges on a loan of £5,000,000. As a consequence of the canal's construction the charges of the Liverpool Dock Board have been so reduced as to permit the Lancashire cotton trade to save £35,000 a year; and it is asserted that the spinners are getting their cotton at five shillings a ton less than before the canal was built. Moreover, the freight rates on yarn exported to European ports are from ten shillings to twelve shillings and sixpence less than they were three years ago. The head of a wholesale bakery in Manchester told the correspondent that he had more than saved his share of the tax on the freight rates on flour from Liverpool. The county of Lancashire is more prosperous than it has been for ten years, and the towns in the area served by the canal are growing in population at a surprising rate.

The amount of canal traffic is increasing rapidly, and the increase must be much greater in the future as a result of a legal decision forbidding the railways to dis-

criminate against the canal. The amount of cotton imported directly from America increased last year from 26,400 to 121,300 bales, and that imported directly from Egypt from 33,720 to 68,123 bales. The quantity of grain and provisions received at Manchester by canal is insignificant compared to the Liverpool receipts, but in paper and paper-making materials, Manchester has actually outstripped her sister port. The great Co-operative Wholesale Society, which has a capital of £1,900,000, and does an annual trade of £9,500,000, has supported the canal from the first, making use of it with its own steamers. The Liverpool Post admits that in 1895 Liverpool lost the handling of imports valued at £4,000,000, as a consequence of the canal's construction. That this great work is not the failure that it has been hastily asserted to be, is clear enough.

So also would we suggest that canalizing, even as it would appear from the most radical standpoint of to-day, will eventually prove of inestimable value to the general commerce of any locality where the improvement has been, or may be, carried out.

"SOO" RIVER PATROL.

Concerning the patrol service in St. Mary's River, it is learned that Capt. Shoemaker, chief of the revenue cutter service, is greatly pleased with the operation of the St. Mary's River regulations during the season just passed. They have proved of immense value to the lake shipping interests, and have doubtless averted disasters. Capt. Shoemaker says that there is no likelihood that material changes will be made this winter in the St. Mary's River regulations. They are strict, but not too much so for the safety of lake commerce. As a rule they have been satisfactory to the vesselmen. Some objections have been raised to them, but the objections have come from those who violate the regulations and were fined in consequence.

A LIFE-SAVING VERDICT.

The report of Lieut. Reinberg on the wreck of the Sumatra has been approved by his superiors in the life-saving service at Washington. The department finds nothing wrong in the action of Capt. Boutin, of Milwaukee, and his life-saving crew in connection with the casualty. An error of judgement, due to a lack of information as to the location of the wrecked barge, caused a delay of the life-saving crew getting there, but no lives were lost in consequence thereof. The schooner foundered while the tug which responded to the signals was near. The tug failed to get one man whom she struck in picking up the men.

NOTICE TO MARINERS.

TEMPORARY DISCONTINUANCE OF POINTE PELEE FOG ALARM.

Owing to damage sustained during the gale of the 5th instant, the fog alarm at Pointe Pelee Spit, "The Dummy," has been rendered inoperative and will not be sounded until further notice.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

Department of Marine and Fisheries,

OTTAWA, CANADA, Nov. 7, 1896.

N. B.—We understand that repairs have been executed, and the signal is being sounded.

All bearings, unless otherwise noted, are magnetic and are given from seward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

water, and all depths are at mean low water.

Pilots, masters, or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notice of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Deputy Minister of Marine and Fisheries, Ottawa, Canada.

SHEBOYGAN HARBOR.

The work upon the "greater" harbor of Sheboygan is rapidly nearing completion. Supt. Cannon, who has been in charge of the work, is of the opinion that a week or two more will complete the dredging for 1896. There is about 800 feet more of docking to be built, and work upon this has been commenced. Rieboldt & Wolter, of Sturgeon Bay, formerly of Sheboygan, have secured the contract for the entire 800 feet, 600 of which is owned by the Chicago & Northwestern Railroad Co. and the balance by the Gilman heirs.

Capt. Zinn, of the United States Engineering Corp, at Milwaukee, inspected the work on Thursday last and was very much pleased with it. His presence was timely, as he took part in a hasty conference of the mayor and board of public works upon a matter that threatened the destruction of a good part of the work already done. The dredging has progressed so far that only 50 or 60 feet remained between the old channel and the line of the new pier. The 200 feet of docking to be built by the Gilman heirs left that distance exposed to the lake, and a good southeaster would have washed the entire wall of earth back into the harbor channel. The conference led to Rieboldt & Wolter being awarded the contract for the 200 feet of dock building and they got it upon the express condition that they should begin operations at once.

THE WORLD'S WHEAT PRODUCTION.

In an advance sheet of the Consular Report, issued by the Department of State at Washington, the statement is made that the world's wheat crop of 1896 is below the average and generally of an unsatisfactory quality. Last year the late and cold spring spoiled the crops to a great extent in Europe, and drought damaged the wheat crop in South America, East India and Australia. But this year the world's wheat production is even less than that of 1895, falling short of it by nearly 200,000,000 bushels.

The great decrease of this year's harvest is owing, for the most part, to the decrease in the wheat acreage. This is especially the case in the United States, where the wheat production is about 78,000,000 bushels less than that of last year. The principal cause of the decrease is the extremely low price of the cereal that has prevailed during the last three seasons. The farmers decided that wheat production was unprofitable, and many gave up trying to grow a grain of which the market price would hardly pay the harvesting.

WORK AT A CLYDE SHIPYARD.

We note a few contracts on the lakes occasionally, but the following from one of our foreign exchanges shows what they can do on the other side of the pond:

"A Clyde firm, Messrs. Russell & Co., of Port Glasgow, have received a veritable windfall in the shape of orders for fourteen steel screw cargo-carrying steamers, varying in size from 4,000 to 6,000 tons, and aggregating the enormous total of 70,000 tons. It is marvelous that such an amount of new tonnage should fall to the lot of a single firm, and we believe that the order is a record one for the Clyde. Messrs. Russell & Co. have occasionally in the past done great things in the way of running into tall figures for a year's output, but they have now achieved a unique position in the more difficult domain of order-booking. This immense contract will benefit the entire lower reaches of the Clyde, for, while the hulls of the steamers are to be built in Port Glasgow, the engines are chiefly to be constructed by Greenoch engineers."

CKLLIGI WOHE SCIAN NEWS AROUND THE LAKES.

al obologi al associa BUFFALO, N. Y.

Special Correspondence to The Marine Record.

Buffalo took in almost 12,000 tons of iron ore last week; not much from an Ohio port's standpoint, but it shows a steady business right along when other ports were almost idle. The Minnesota dock has a big fleet down for it to come this week.

The slow work on the creek bridge tempts some wicked people to propose a few bets on the job. If there is any one who will take any bets on the chances of his living till the new structure is up he has not yet been heard from. We are going to have a bridge, though, and when it is done it will be a good one.

There is a good showing in lumber also. The week brought us ten and a half million feet, with some to be accounted for yet. There is some uncertainty as to the return for any more this season by the lumber fleet. They demand an increase in freight, which is the customary thing this time of the year, but it is refused and

some at least will lay up.

There is a rumor that John Gordon is about to come to the fore again in some extension to his Great Lakes Line of which the steamer Globe is still the only ship. He was expected by the older lake lines and some other people to fail to get his package freight carried east from here and so collapse at once, but he has managed to come out ahead right along, and if he does not get away from the combination somewhere else before long

it will be a wonder.

The fact is the lumber fleet has caught it badly of late, after a season of next to no losses at all, so far as this port is concerned. All at once "Old Nep" seemed to have got after the whole of the lumber fleet and there has been no safety since. The C. L. Young, Nellie Mason, Sam Flint, Connelly Bros. and Canisteo got into trouble one after the other, and their losses are still to be adjusted. The Young is still fast on Horseshoe Reef with most of her lumber on board. Some days the wind was high and others there was no lighter to be had. She went on the reef a week ago Thursday. Still grain flows in like water, more than a million bushels in a day by the week and still it is to continue coming down the lakes. So far the roads and the canal have done nobly, but the canal is to stop this week and the roads will have to go it alone. They will do well enough if there is any room for the grain at eastern points of destination and it may all turn out right any- 134 cents. how, as there is considerable grain under charter now that comes down for winter holding affoat. It looks as though there would be some of this unloaded all the same if there were to be an elevator ready when the cargoes get here.

There is no denying that the Buffalo elevators are doing a good business this season, whether they are in the pool or not, let alone any estimate on the total amount handled by them all, take the Raymond, or the Grasshopper, as it is sometimes called. It is a transfer that did not get into running order till September and yet Mr. Raymond tells me that he has already handled 2,500,000 bushels. He is still a good deal handicapped by the lack of water in the channel leading to the elevator, and is preparing to get some more bills through the legislature for dredging out the Erie basin.

By the way, the Express is again the great paper on canal sensations. It did not start the story of the few millions that certain men, only one or two of them canal operators, are preparing to lay out in canal fleets right away, but it gives it a page or so. The story is a neat one and if it has any truth in it there will be no further use for ordinary canalers, Cleveland steam boats or anything. There is a beautiful indefiniteness in most of the page articles that show how Arthur Sewall, he going to revolutionize canaling and do it so quick that the water will all run over the top of the canal bank, unless some one holds it down.

There is at least one practical canal man mentioned in the scheme, Frank Beadle, of Buffalo, is one of the few really successful boat owners here. He owns the largest tow on the canal and he keeps it going. The steamer tows five consorts and there are no tow bills to pay, either here or in New York, so net earnings come close up to the full gross amount. When he drops a sure thing for something that cannot possibly be got into shape till the enlarged canal is a fact, which will be a matter of four years yet, his usual business tact

will have deserted him.

I find a few of the lumber tows willing to go back to the upper lakes for loads. They say that no advance could be obtained from Lake Michigan points, but a tow that is bound for Deer Park-always reckoned a bad place to get to-is supposed to get \$2; but rates are private at this time of the year and hard to discover. Buffalo will get all the lumber it wants and lay up with about the same amount as last fall; but Tonawanda has taken in more than twice as much by lake as we have, though the heavy shipments by canal show that a larger amount of the receipts than usual have been consignment lumber, which goes through without delay in yard. Buffalo buys and sells practically all it handles.

Major Symons, the government engineer, is at work on a report on the feasibility of making the new canal locks big enough to get gunboats through them. This may be good exercise for him, but what the government wants of such information is hard to say. Somebody with an invention to sell or a theory to work off has come to the fore, I suppose. The idea that any sort of armed fleet could get up into the Great Lakes, if any one was opposed to it, is more than preposterous. A boy with a toy dynamite bomb, if they make such sizes, could render any locked canal impassible in a quarter JOHN CHAMBERLIN. of a minute.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

James A. Calbick & Co. chartered the steamer Toltec and consort Miztec for corn to Port Huron at 21/2 cents.

The schooner Butcher Boy stripped on her arrival in port last week and will go into winter quarters as soon as her load of lumber is taken off.

H. W. Cook & Co. chartered the steamer Queen of the West and consort Halloran for corn to Ogdensburg at 5 cents, cargo to be held until spring.

Capt John Freer returned home Sunday from Alpena, where he had placed the scow A. R. Kellogg, which he had been master of since the spring, in winter quarters. The side wheel excursion steamer Chief Justice Waite

was sold by the United States marshal Monday morning for \$810 to C. A. Funk, of the Independent Coal Co.,

of this city.

At the Independent Tug Line's floating dry-dock the steam canal boat International was in dock for a general overhauling and some calking; the tug Commodore for general repairs and repairing steam bearings,

The Holland and Chicago Line steamer Soo City, lay up. She would have continued to run until later in the season but for the lowness of the water at Holland. The steamer Soo City was in dock to have a leak

stopped and some repairs to her rudder; the steamer W. A. Haskell went out of Miller's dock Friday after receiving expensive repairs, amounting to nearly \$20,000.

J. J. Rardon & Co. chartered the steamer Superior and schooner Ahira Cobb for corn to Ogdensburg, cargoes to be held until spring; steamer Gladstone, wheat to Sandusky at 31/4 cents, to hold; steamer Phoenix for wheat to Detroit at 2½ cents.

Carr & Blair chartered the steamer Edward Smith No. 2 for corn to Ogdensburg at 4 cents; the steamer Nyanza, corn to Erie, 15% cents; steamer Progress for wheat to Toledo at 2 cents; steamer Fedora, wheat to Buffalo at 2 cents; steamer Tampa, corn to Buffalo, at

The Graham & Morton Transportation Co. have chartered the L. M. & L. S. Transportation Co.'s steamer City of Duluth to run between Milwaukee and St. Joseph during the winter months to commence run-

ning December 15.

The L. M. & L. S. Transportation Co.'s steamer Peerless, which left here on the 7th inst. for Lake Superior, on her last trip this season, will lay up at Duluth; the company's steamers City of Traverse and Jay Gould, which left here last week for Lake Superior, will return to Chicago and lay up.

At the Chicago Ship Building Co.'s shipyard the steamer Nyanza was in dock for a new shoe and some calking; the tug C. W. Elphicke for a new stern bearing, the tug Andrew Green for a new rudder and some calking and ironing; the barge Superior for new stop

cocks and some calking.

It is the impression of many marine men here that Capt. Duncan Corbett was murdered on board the schooner Waukesha and that his body was weighted so that it should not go ashore. They point to the fact that the captain's body has not come ashore, and the bodies of all the members of the crew have done so.

The Dunham Towing and Wrecking Co.'s tug L. B. Johnson was sunk near the entrance to Chicago harbor of the free silver movement and beloved of one Tom on Friday by the steamer V. H. Ketchum which she has Watson, along with the Cramps and a few lawyers are in tow. This is the second time the tug Johnson has been sunk this season, the steamer Mary Wells ran her down and sank her not far from the spot where she is

now sunk, about three months ago.

The steamer George W. Morley in tow of a tug collided with the steamer Arthur Orr lying at the St. Paul railroad dock, striking her amidships, bending in some plates and breaking a shelf piece. The Morley was going up the north branch and when about to turn at the forks of the river she went ahead instead of backing up. The Orr went to the South Chicago Ship Building Co.'s shipyard to have the damage repaired.

The Chicago Ship Building Co. have contracted to build two steamers for a syndicate at Cleveland and a tow barge for C. W. Elphicke and others, of Chicago. The dimensions of the two steamers are 240 feet keel, 42 feet beam, 26 feet molded depth; they will have tripleexpansion engines with cylinders 17 and 29 and 47 by 36 stroke, and Scotch type boilers 11 by 11. The dimensions of the barge are 352 feet keel, 44 feet beam, 26 feet molded depth, the steamers and barge are to be completed about the opening of navigation. The Chicago Ship Building Co. are also building a quadruple engine with cylinders 19, 28, 41 and 60 by 42 inches stroke for the steamer Crescent City now on the stocks in their shipyard and which they are building for the Zenith Transportation Co. The new steamer will also be supplied with Babcock & Wllcox boilers, which will be duplicates of those on the steamer Zenith City, recently built by this firm. WILLIAMS.

CLEVELAND, O.

Special Correspondence to The Marine Recora.

Capt. John Swainson is again in editorial charge of THE MARINE RECORD. He was out of the management of the paper about eighteen months.-Recorder.

The master of the schooner Surprise, discharging Inmber at this port, is said to be missing, and libels are out for crew's wages and other labor performed for the

vessel.

Mr. Edward Smith, the well known Buffalo vessel agent and broker, visited this port on Wednesday and called on his marine friends and business associates.

Capt. John Swainson has assumed editorial charge of THE MARINE RECORD The captain's friends are pleased to learn that he is again molding opinions for mariners. -Leader.

The U.S. Engineer in charge of this district does not figure on carrying on much work, if any, during the winter months and will shortly close all contracts until spring opens up with a chance to get in a full and good day's work.

Whitworth Bros., printers and publishers, High street, have issued an excellent map of the city in enlarged form, suitable for hanging. Accompanying the map is a street directory, printed in a convenient size for carrying in the pocket, and which also contains a very superior folding map.

It seems likely that the Northern Steamship Co.'s freighters will have more freight than they can carry before the close of navigation. Only two boats are running, and they are able to carry only about 2,000 tons of merchandise at a trip. There are 7,000 tons of freight waiting them here, and 6,000 tons in Buffalo.

During the past week Pickands, Mather & Co., representing the Minnesota Steamship Co., received bids Capt. Michael Driscoll, will go to Holland this week to from several builders for a large tow barge and for lengthening one of the smaller steamers of the line. After the bids had been opened, it was decided not to go

on with the work this winter. It does seem as if the Weather Bureau was making some wild guesses about the weather this week, and I have heard it repeatedly spoken of among vesselmen. Perhaps if snowstorms and hurricanes are heralded frequently enough, we may eatch something before Christmas, but it has certainly been June weather up to

The passenger steamer City of Buffalo made the run from the Cleveland breakwater to Detroit, Sunday, in 5 hours, and 57 minutes, and that is probably the best time ever made between the two ports. She made the run from Cleveland to the Dummy light in 2 hours and 21 minutes, which is 20 4-10 miles an hour, figuring the distance at 48 miles. The steamer was sent to Detroit for a general overhauling of her electric plant, and will go into winter quarters there.

Colonel Jared A. Smith, corps of engineers, U. S. A., believes that the next Congress will be liberal toward Cleveland's harbor. There seems to be no doubt that Cleveland will get \$300,000 or \$400,000. This money will be expended principally in widering and extending the east arm of the breakwater. The plans, which have all been published, include the dredging of the river at its mouth to a depth of twenty feet. The increased draft at the "Soo" makes this improvement very desirable.

Ore receipts at the ports comprising the Cuyahoga custom district, Cleveland, Ashtabula, Conneaut, Fairport and Lorain, for the period intervening between May 1 and November 1, were 5,197,800 tons. The movement of ore as shown by the custom house reports for the month of October was light. The receipts at Ashtabula during October were heavier than at Cleveland, as was also the case in September. The following are the figures for last month.

Gros	ss Tons.
Ashtabula	193,887
Cleveland	181,363
Fairport	
Conneaut	35,582
Lorain	10,269
	TANKS BEET STORY

504,603 Total In September the total recepits at the ports named were 708,465 tons; in August, 888,171 tons; in July, 1,121,988 tons; June, 1,132,169 tons; May, 1,065,888 tons. The shipments of coal in October amounted to 218,-163 tons, divided as follows:

the rest of the second of the rest of growing Ne	t Tons.
Cleveland.	109,140
Ashtabula	66,552
Conneaut	21,320
Fairport	16,600
Lorain	4,551

The coal shipments of September were 236,604 tons; for August, 296,409 tons.

On Saturday the Sheriffs Manufacturing Co. shipped a wheel of 6 feet 11 inches diameter to the steamer Pewaukee, at Sturgeon Bay. In this connection it is reported that toward the close of last week the tug E. D. Holton, of Frankfort, Mich., broke a wheel which she had swung ever since her launch at Milwaukee in 1874, twenty-two years ago. The wheel was one of the old-style Sheriffs make, and because it had too much lead to suit them the Milwaukee tug captains tried in every way possible to break it, but never succeeded. Another Sheriffs wheel has been ordered and will be shipped in a day or two.

FISHER LASSIES.

The wind blows up from the nor'west waves, Chill, salt and strong, from its ocean caves; The sea glows yet in the sunset's hue And the hollowing sky is a cup of blue.

But the sentinel rocks on the headland's right Are black and grim in the waning light; And, out in the west, a lone, white star Keeps its steadfast watch o'er the harbor bar.

Over the waves where the red light floats To the glooming shore come the fishing boats; And the girls who wait for their coming in Are something to wind and wave akin.

Born of the union of sky and sea, Joyous, lithe-limbed as the sea-birds free, Fearless in danger and true as steel, To friend unswerving, to lover leal.

No care is theirs; all the world they know Is the sky above and the sea below; Light o'er the water their laughter floats As they wait on the sand for the fishing boats.

Brown are they, yet the tint that glows In their cheeks has the hue of a crimson rose, And never brighter or clearer eyes Watched over the bar 'neath the sunset skies.

When the wearisome toil of the day is done And the boats come in with the setting sun, Sweethearts and brothers, tall and tanned, Bend to the oars with a firmer hand.

Each one knows at the landing dim Some one is waiting to welcome him, Over the harbor the twilight creeps, The stars shine out in the sky's clear deeps.

From far sea caves comes the hollow roar, And the girls have gone from the darkened shore; For the crimson has died from the sky-line's bound, And the boats are all in from the fishing ground.

-M. L. Cavendish, in Youth's Companion.

FLOTSAM, JETSAM AND LAGAN.

The fog whistle on Pelee Spit, Lake Erie, has been repaired and is again in operation.

The barge Nelson of the steamer A. Folsom's tow, has been released from Windmill Point, St. Lawrence River.

Both sides of Manitowoc River are now dredged to a uniform depth of water from the harbor to a point between the bridges and 17 feet may be carried all the way up. I Atan gas to agree with the

A. W. Betts, Esq., of Toledo, O., expects to build a handsome yacht, about 100 feet in length, with triple expansion engines, and fitted up as such fancy tonnage usually is.

An attack of typhoid fever has compelled Capt. W. G. Stewart to relinquish the command of the steamer Cumberland. Capt. White, of the steamer Hiawatha, has taken charge of the Cumberland.

A dispatch from Port Colborne, Ont., states that the wreckage coming ashore at Sugar Loaf is from the old schooner H. S. Wallbridge, which stranded on Long Point July 16, and is now rapidly breaking up.

Duncan Armstrong, of Port Colborne, Ont., has let the contract for constructing a new tug to A. Abbey, of Port Dalhousie. McCleary & McLean, of Merriton, will supply the oak, and the machinery will be purchased in Buffalo.

Waukesha casualty at Muskegon, was a son of wealthy parents in New York City, an independent wayward boy, who at the age of 15 ran away and became a sailor on the lakes.

Archibald Campbell, of Lakeport, Ont., the Port of Colborne, owner of about all the shipping hailing from that port, among others the schooners Katie Eccles and Keewatin, fell off his own dock one day this week, in a fit of dizziness, and was drowned.

An admiralty case in which John Green seeks to recover from the Ogdensburg Transportation Co. and the Central Vermont Railroad Co. the value of 62,874 bushels of corn, lost in the steamer Lewiston, is up in the United States Court at Utica, N. Y.

Mr. W. Macarther, editor of the Coast Seamen's Journal, published in San Francisco, is an aggressive and skillful writer. It is quite certain that the editor would be as much at home hauling out the weather earing of a topsail as he is in pushing the editorial pen.

A Duluth paper says: "Coal receipts at the head of the lakes are commencing to fall off, and they will continue to do so from now until the close of navigation. Winter has set in much earlier this season, and if the cold spell continues for any length of time navigation

will be closed inside of two weeks. Most of the coal docks are almost filled, and those of them which are not will be stocked up inside of ten days."

It is announced that the Rockefeller iron syndicate has sold \$500,000 worth of Minnesota ore to be delivered next season, and 60,000 tons of Spanish-American ore-This will enable the mines of the Mesaba range to renew operations and will give employment to a large number of men.

The inquest on the three men killed in the Rhoda Stewart boiler explosion last May began Saturday at Cheboygan, but was adjourned to get the testimony of Ross, the boiler-naker who made repairs on the boiler. He could not be readily found, and another adjournment was taken for a week.

General Superintendent John Ryan, of the Illinois and Michigan canal, announces that the canal will be closed for navigation from Bridgeport to La Salle, Ill., on Nov. 15, at midnight. If the weather permits boats will be allowed to run after that date between Joliet and Bridgeport at owners' risk of being frozen in.

The big raft of piles which arrived in San Francisco on the 26th of August, in tow of the Mineola, was only five and three-quarter days from Columbia River bar. It contained 450,000 feet, was 528 feet long, 51 feet wide and 31 feet deep, and drew 21 feet of water. It is said the Southern Pacific Railroad Co. saved \$11,000 by this method of transportation.

The last of the sailors who lost their lives through the foundering of the Sumatra, off Milwaukee, has been picked up about eight miles northeast of the harbor entrance. The sailor's name was Henry Hanner, and he hailed from Bay City. The body was turned over to the Mills Transportation Co., and sent to Bay City for

Buffalo papers say the damage to the grain cargo of the steamer C. W. Elphicke aggregates \$3,000; to the grain cargo of the steamer C. A. Eddy, \$724, and to the cargo of the steamer J. Emory Owen, \$270. These losses, it is said, will fall upon the owners of the steamers, as the underwriters have established the fact that the steamers were not in proper condition for carrying grain.

The captain of a sailing ship loading case-oil at New Town Creek, New York, writing to his owners, says: "I shall be very glad when I get down below out of this place, as the smell from the water is very bad and nauseating."-Fairplay, London. Come and see us, Captain, either at Buffalo, Cleveland or Chicago, with several other lake ports thrown in. We can certainly discount New Town Creek in the summer, and give you all of the elegancies of smell you may desire.

Duluth has already shipped 44,984,000 bushels of wheat, 401,555 bushels of corn, 4,309,000 bushels of oats, 3,995,000 bushels of rye, 2,381,000 bushels of barley, and 5,008,000 bushels of flax. The number of cargoes shipped during the season show an average of 67,777 bushels, which is in excess of last year. One hundred and twenty-nine cargoes of wheat were sent down from Duluth in May, which was the heaviest month. Last month 98 boats were loaded with wheat.

According to the annual report of Paymaster General Albert Foster, one of the lost seamen of the schooner Stewart, the cost of maintaining the United States Navy last year, exclusive of any increase to it and the permanent improvements at yards and docks, was \$15,494,862. The money and material spent in arming and equipping the naval militia, not including material loaned to the states, was \$27,186. It is understood that the establishment of a reserve fleet is now in contemplation by the department, and that special storehouses for the stores pertaining to such vessels will be part of the plan. The paymaster general says that if this should be done the department will be able not only to take better care of the stores, but also to put vessels into commission much more rapidly than at present.

It is reported that Capt. McQueen, mate of the steamer Oregon, has been mysteriously missing since Oct. 15. At that time he was taken ill while his vessel was in Sandusky, and he was given a leave of absence to go to his home in Elyria. The police have been called into the investigation, and it is their opinion that he was either waylaid on the docks, robbed of his money and his remains disposed of in the bay, or that he was made away with by tramps on the Lake Shore road. The authorities claim to have information that would tend to prove either assertion. When he left the boat he had a considerable sum of money on his person.

PRAISE FROM TOLEDO.

The Toledo Blade has the following words of praise for one of the latest built steel ships from the yards of the Cleveland Ship Building Co.

"As fine a steamer as has ever been seen in Toledo is now in port. This magnificent craft is owned by the Wilson Transit company, of Cleveland. She is in length, 415 feet; beam, 45 feet; hold, 30 feet. Her engines are triple expansion, diameter of cylinders, high pressure, 23; intermediate, 39; low pressure, 63, with 40-inch stroke. She has two boilers 14 feet 8 inches in diameter and 12 ft. long, and three 40-inch turnaces to each boiler. She is equipped with every modern convenience, including the Elwell-Parker system of electric lights. Her captain is A. M. Shepherd, formerly on the steamer Olympia, and he is a thorough gentlemen as well as navigator. Her first engineer is Mr. Fred Harmon, an old Toledo boy, who is in every way capable and thorough in everything he does. His many friends here were pleased to see him. The company named is building another boat, to be five feet longer than the Rees and three feet wider. Engineer Harmon will bring her out in the spring of 1897. The Rees on a draught of 15 feet 6 inches takes 6,000 tons. She brought here 5,000 gross tons of ore from a Lake Superior port. Superintendent Todd, who has charge of the railroad shipping yards, says the Rees is one of the largest and finest boats he has ever seen. She carries 2,700 tons of water ballast when running light.

CHRISTENING AT A LAUNCH.

The following story is from a recent issue of Fairplay, London:

"A good story reaches me of a good-looking and successful Semitic shipowner. He attended at a launch of a new vessel of his fleet, and invited a large number of friends to the christening. Some one intimate enough with him to talk on such a subject said: 'My dear friend, I am very much surprised that a gentleman of your religious leanings should lend himself to the use of such a term as 'christening' in connection with the vessel, considering the derivation of the term.' 'Oh,' replied the owner, 'it is a mere formality; there is nothing to make a fuss about, and the word does not carry any particular meaning in regard to the launch of a ship.' 'Just so,' said the party, 'but why break a bottle of champagne on the vessel's bows by way of completing the ceremony? I should have thought that it would have been more in accordance with the fitness of things if you had cut a little bit off the bowsprit.'

YACHTING INTERESTS.

The Interlake Yachting association will have an important meeting in about three weeks, probably at Cleveland. The constitution adopted at the recent Buffalo convention of Lake Erie and Lake Ontario will be passed upon. One of the new rules which is likely to meet with the most favor in their eyes is that providing for water-line measurements with the crew on board, or, in the absence of the crew, allowing an average of 150 pounds per man. This regulation will greatly help the older boats and the cruisers, which, owing to their build, do not sink nearly so far in the water with their crews aboard as does the more modern yachts.

Though the new rules have not yet been made public, and will not be until after they have been ratified by the associations of Lake Erie and Lake Ontario, and possibly by Lake Michigan, the fact that they are are closely patterned after those of the Long Island Sound Yachting Association, which were taken as a model, insures that they are sure to meet with very few objections from lake yachtsmen. 70 9130 1900 , vac

A LIGHT-KEEPER DROWNED.

The light-keeper's boat of Spectacle Reef light station was found on the east end of Bois Blanc Island, badly broken to pieces, on Tuesday, and it is now known that assistant keeper Spaulding is drowned. He had been to Cheboygan to land first assistant Gallagher and started for his station alone. He reached there late in the afternoon, but could not land on account of the sea. He came to anchor within hailing distance of the station. Some time during the night he slipped his anchor and started for the nearest land, Bois Blanc, fourteen miles away, and by some accident was drowned. This leaves two men at the station. Spaulding leaves a widow and three children at Alpena. and three rorsM

on a roport on the reasibility of man the the new talls

THE TOLEDO NAVAL RESERVE.

Lieut. Commander Betts, of the Toledo naval reserve, successfully passed his examination before the board, last week, and has received his commission. The staff appointments will be: W. G. Welbon, adjutant; R. G. Nelson, navigating officer; H. H. Cushing, signal officer; Dr. J. T. Newton, surgeon, and Dr. Phil. Reig, assistant surgeon.

The petty offices, both for the battalion and the divisions, will be announced later, but the offices will be filled by temporary appointment only.

Lieut. Commander Betts says: "I have been promptly make a requisition for such equipment as we will need. notified by the Navy Department to have Gov. Bushnell The manner in which the Navy Department has watched our work has been especially gratifying. Of course, such equipment as we receive will be charged against our share of the federal appropriation for naval reserve purposes. This amounts to \$50,000, and our share will be somewhere between \$4,000 and \$7,000. This can not be drawn in money, but in supplies, apart from uniforms.

"The matter of uniform has not yet been settled, but I think it will be very soon. We need about \$1,200, and will not get any money from the state until next winter. I am in hopes that a dozen patriotic business men can be found to let us have this money until that time, at, of course, a fair rate of interest. I am very sure that we will receive the appropriation from the state. In fact, I have received assurances that there will be no trouble boats arises, not so much from the use of metal in their on that score. Gen. Axline is anxious to help the naval reserve in every way, and has made a trip or two to Washington in our behalf. In addition to the dispatch from the Navy Department at Washington I am just in receipt of a very kind letter from Lieut. G. H. Stafford, in charge of the Hydrographic Office in Cleveland. He writes that he is preparing to send us a complete set of maps, charts and all the printed matter at his disposal, pertaining to the navigable waters of the Great Lakes.

"The project of securing a ship for our use has not reached tangible form yet, but the law provides that naval reserve organizations shall be given the use of such ships as are available for training purposes, and I am sure that Washington will give us every assistance possible in that regard."

THE NAVAL ARCHITECT'S MEETING AND ITS ANNUAL WIND-UP.

There was a larger attendance on Friday at the annual meeting of the Society of Naval Architects than there was on the day previous. President Griscom was in the chair. "The New Battleships" was the subject of an exhaustive paper by Chief Constructor Philip Hichborn, U. S. N., vice-president of the society. F. L. Dubosque read an article on "Speed Trials of a Screw Propelled Ferryboat." Hugo Hammer, associate member of the society, read a paper entitled "A Method of Calculating the Stability of Ships Adapted to the Use of Standard Curves of Stability." "Stability of a Ship in a Damaged Condition" formed the subject of a paper prepared by James Swan.

Assistant Naval Constructor T. F. Ruhm, U. S. N., in a paper read by the acting secretary, treated elaborately in a mathematical way on "The Damaged Condition of a Battleship as Affecting its Stability and Fighting October, 1896: Efficiency." Prof. George R. McDermott discussed "Screw Propellers."

The fourth annual meeting of the society was finally wound up with a banquet in Delmonico's, New York, of course. Covers were laid for 150 guests and ranged around the table at which President Clement A. Griscom presided were the guests of honor, among whom were Secretary H. A. Herbert, Commodore Sicard, commandant of the navy yard; Rear Admiral Erben, retired; Capt. Mertvago, of the Russian legation; G. H. Daniels, Nathaniel G. Herreshoff and Charles H. Cramp, of Philadelphia. Ample justice having been done the elaborate menu, President Griscom toasted the President of the United States. The toast was drunk standing. The second toast was the United States Navy, which was responded to by Secretary Herbert. He replied in a glowing eulogy of the United States Navy.

The other toasts were the "Congress of the United States," Congressman Belford; "The Press," Joseph Howard; "The Maritime Exchange," Hugh Kellty; "The Society of Mechanical Engineers," C. H. Lovering, Engineer-in-Chief; "The Naval Militia," J. W.

Miller; "Our Society," Chief of Construction Hichborn; "The Shipbuilders," Thomas W. Hyde. W. R. Webb, G. B. Daniels and Stevenson Taylor were called upon for short talks.

AN ERIE CANAL PROJECT.

A report from New York has it that there is a gigantic canalboat combination just ready to be floated, with steam canalboats, storage warehouses and Niagara electric power included. The promoters of the company are said to be Alexander R. Smith, secretary of the Merchants' Marine Association; Erastus Wiman Edward M. Clarkson, George H. Raymond, Frank Beadle, of Buffalo, and the Cramps, of shipbuilding fame. An order for a fleet of forty vessels will be placed shortly.

At the convention of the Naval Architects, in New York, last week, Lewis Nixon, manager of the Crescent shipyard, Elizabeth, N. J., read an interesting paper upon the subject of steel canalboats. Among other things he said:

"The first fleet of steel canalboats, to run from Cleveland to New York, was constructed in 1895, and set at rest all doubts as to the fitness of steel boats for the service. It is safe to say that this system of water transportation will reduce freight rates at least 25 per cent below rail rates. The trip is made from Cleveland to New York in about ten days.

"The importance of this growing fleet of steel canalconstruction as from the attention which their success as treight carriers has directed toward the possibilities of the Erie canal and the results in the way of water transportation which are sure to follow." The particulars relating to the adaptability of the new steel canalboats are all right, but we very much doubt the formation of another company on the lines and with the promoters as mentioned above. For one thing there are conflicting interests at work among the industrial projectors.

LIQUID FUEL.

French papers give particulars of experiments carried on by M. Paul d'Humy, a French naval engineer, having had for their object the converting of petroleum and other oils into a hard, homogeneous mass, suitable for fuel on board warships and other seagoing vessels. The material he produces is not affected by either heat or cold, and is absolutely smokeless and odorless, and he believes it will in time completely change the present methods of propulsion of warships. He has been able to turn the highly inflammable oils into hard cakes of any size or shape, and says they can be stored anywhere without the slightest danger. When ignited these cakes burn only on the surface, and give off an intense heat. The substance cannot evaporate nor cause an explosion. It requires very little draft to burn brightly, and makes no more than from two to three per cent of ashes. He calculates that one ton of this fuel will equal thirty tons of coal, and that the cost will not be more than from five to ten dollars per ton.

COMMERCE OF TACOMA.

Harbormaster Clift makes the following report of ocean commerce at the port of Tacoma for the month of VALUE.

IMPORTS.

From China and Japan From Europe	\$ 574,177.74 31,641.24
Total Previously reported	\$ 605,818.98 2,873,455.14
Total imports, ten months	
344,532 bushels wheat	\$ 255,062.00
32,008 barrels flour	
9,486,614 feet lumber	
33,465 tons coal	
Merchandise to China and Japan "British Columbia	539,338.00
TotalPreviously reported	
Total exports, ten months Same period last year	
	#2 17C 100 10

Inward registered tonnage, 73,057; inward cargo tonnage, 13,268; outward registered tonnage, 158,828; outward cargo tonnage, 64,220; deep sea arrivals, 53; departures, 43; coastwise shipments of wheat, 3,310 tons; coastwise shipments of flour, 1,025 tons.

Increase over last year.\$2,176,190.40

RAFT TOWING ON THE PACIFIC COAST.

Instead of sending lumber down the coast on sailing vessels as heretofore, the lumbermen of the Pacific coast have taken a tip from the eastern dealers, and now pack the logs together in the form of rafts and have them towed down by steamers. The experiment of sending these rafts down was first tried about a month ago. The first raft was a monster from Vancouver Island, containing 600,000 linear feet of piling. It was cigar-shaped, and was towed down as far as the harbor of San Francisco by the steam collier Mineola. At the mouth of the harbor it was taken in charge by two tugs, which towed it safely to the wharf. The raft was over 500 feet long, 50 feet broad and 30 feet deep, and was held together with about fifty tons of iron chain. It drew twenty-four feet of water, and, as the bar over which it had to pass was barely twenty-five feet under water at high tide, the raft had to be kept waiting until flood tide was at its highest before it could be brought in.

Had the logs scraped the bottom or struck a snag, the chain which held it together would probably have snapped instantly, breaking the raft and exposing the shipping of the harbor to the greatest danger from the floating logs. All dangers, however, were averted by the great care taken, and the raft was finally moored to the dock while it was taken apart. It was found to contain between 6,000,000 and 7,000,000 feet of timber, board measure, with a market value of \$60,000. This innovation makes a large increase in the lumber trade of San Francisco, which will hereafter take rank among the leading lumber markets of the world.

PACKING RODS.

A leaky stuffing box and a hiss at every stroke, of steam escaping past a valve rod will be noted by any employer and invariably commented upon, says the Iron Age. Hence, many engineers will pack their rods as tightly as possible, no matter what the friction is so long as the leak is stopped, and by excessive friction and screwing up hard do away with the necessity of careful packing and the use of proper packing.

Nearly every engineer has his method, and nearly all will favor some particular brand of packing. The method one engineer has in using his packing makes one kind of packing better for him than another, and his method would not be so successful upon another kind of packing. Each engineer should consider his own method, and endeavor to use his packing in such a manner that a tight rod may be obtained without excessive friction, and by giving attention and thought to the matter this will not appear difficult.

There is certainly no reason why, with the ordinary pressure, a joint cannot be made with any of the common packings and be tight, if care is taken and the rod is anywhere in line. With some kinds of packing sold, the packing acts differently when hot than when cold, and under pressure and heat will ooze out of the side of the joint. Packing of this kind may give less trouble in a stuffing box where it is confined, but cannot be depended upon to withstand any pressure.

The essentials are a true rod, packing that will fit the box properly and not curl over when under pressure, and cut with ends that will match fairly well and put into break joints, and the gland screwed down squarely. Slipping the rings in carelessly, so they will not fit the rod, makes it necessary to jam the whole mass together to make a tight job, when by careful fitting it can be made tight by a slight pressure.

SUIT FOR PERSONAL INJURIES.

The personal injury suit of James Mallow against the Graham & Morton Transportation Co. for \$10,000 damages was taken up by Judge Seaman in the United States Court at Milwaukee this week. Malloy was engaged as a seaman on one of the company's boats and while moored to the dock in Milwaukee he was put to work calking. By the sudden starting of the boat Malloy was caught between the boat and the dock and badly injured. He reported his injuries to Capt. Griffin, but attended to his work for about a week as well as he was able, when he was forced to go to the hospital. The physicians, after making an examination, told Malloy that his injuries were permanent and that he would never be able to work again.

LAKE SHIPBUILDING.

In addition to the three new keels at the Davidson yard, mention of which was made in our issue of last week, the Chicago Ship Building Co. have closed a contract with the Lower Lakes Steamship Co., Robert R. Rhodes, Cleveland, managing owner, for two steel steamers of the following dimensions: 240 feet in length, 42 feet beam and 24 feet depth of hold. These dimensions show new tonnage fitted for the Welland canal trade and it was thought that the boats would be put into a special line in connection with a railroad, but Mr. Rhodes says that such is not the case. The new boats will be in the general cargo trade and will make the best possible charters, irrespective of their handiness for the Welland canal and Lake Ontario navigation which the vessel dimensions show. In relation to this last new contract for shipbuilding the Chicago Times-Herald says: "The most profound secrecy is being maintained as to the traffic in which the two steamers, which have been contracted for by the Lower Lakes Steamship Co. to the Chicago Ship Building Co. are to engage. It was the general opinion in lake transportation circles Friday that the boats are to be the nucleus of a new line of steamers between Chicago and Oswego, N. Y., where rail connections may be made to the seaboard at New York with the New York, Ontario & Western railroad. That railroad has long been sceking an outlet to the west by way of a line of its own. If this surmise is correct it will give Chicago another important lake and rail connection with New York at the opening of navigation next spring. It may seriously interfere with the efforts of the trunk lines to practically pool all of lake and rail business between the seaboard and Chicago, which they are now trying to do." We can assure the Times-Herald on the strength of the managing owner's statement that no such agreement as the foregoing is even thought of, and, as we have stated, the boats are intended for the general cargo trade, to transport cargo from or to any lake ports wherever the best freights are offered.

The modern triple expansion engines which are to go in these new steamers will be built by the Cleveland Ship Building Co. as well as the boilers. The diameter of the cylinders of the engines are to be 17, 29 and 47 inches by 36 inches stroke. The Chicago Ship Building Co. have also contracted to build a tow barge for the Elphicke-Orr syndicate, to be a sister ship to the Aurania.

There are other contracts for new tonnage being worked on, mention of which has been made in these columns, and among which are four passenger steamers. The specifications have not yet been determined so that further particulars can not be given at this time.

CHINESE RIVER REGULATIONS.

- 1. Steamers plying between Shanghai, Soochow and Hangchow will either (a) carry cargo, or (b) not being able to carry cargo themselves, will tow chartered junks or foreign-owned vessels cargo-laden. To whichever category the steamer belongs, it must on arrival be reported by the consul, and must clear at the custom house before leaving port. Foreign steamers carrying cargo must make application to the custom house for the same, and, after payment of duty, obtain a permit to land or ship before discharge or shipment can take place.
- 2. Foreign steamers plying regularly to and fro between Shanghai, Soochow and Hangchow may, on depositing their papers with their consul at Shanghai, obtain through him from the Shanghai custom house a "River Pass" valid for six months. Steamers holding a "River Pass" will be permitted, after payment of duty, to load or discharge cargo before receipt of the consular report to the customs. The application to the cousul for a "River Pass" must state distinctly whether the steamer is to carry cargo or to tow foreign-owned vessels cargo-laden; and if she is declared as to tow, she is forbidden (1) to tow more than three vessels at a time. and (2) to carry cargo, under penalty of confiscation of any cargo carried. Further, the Shimonoseki treaty defines the route to be followed by foreign vessels plying to and from Soochow and Hangchow as the Woosung River and Grand Canal. Foreign steamers, foreign chartered junks and foreign owned vessels will be required to follow the authorized route, which is now defined as follows: Shanghai to Soochow-Woosung River

or Soochow Creek to Huang-tu, Luchia-pang, Sanchiang-k'ou, Chio-fang, Kaotien, and through the Mi tu bridge; Shanghai to Hangchow-Hangpu River, by Min-hang, Sung-chiang, Feng-ching, Chia-hsing, and Grand Canal, as far as the Kung-ch'on bridge; Soochow to Hangchow or vice versa-via the Grand Canal, passing Wu-chiang, Pei-ch'ih, P'ing-wang, Chieh-p'ai and Chia-hsing. If, therefore, a steamer be discovered on other than these inland waterways, both steamer and her cargo will be confiscated.

- 3. Foreign steamers shall by day, in addition to their national flag, fly a special customs flag, and shall by night, in addition to the customary lauterns, carry special lights as prescribed by the customs. The special lights to be exhibited at night shall be three white lights in a vertical line.
- 4. The special customs flag to be flown by foreign steamers trading between Shanghai, Soochow and Hangchow shall be white in color and of oblong shape, measuring 4 feet in length by 14 inches in breadth, and shall bear the following raised Chinese characters in red: * *

The foreign owner is to supply the steamer with the special customs flag."

VESSEL INSPECTION FEES.

There has been perhaps a desire to overcharge in the matter of inspection and surveys of vessels on the lakes, rivers and coast. In looking into this question we have at Messina, who kindly furnishes us with the following scale in use under his jurisdiction at Messina.

The fees which are to be paid to marine experts for each and every visit, ordinary or extraordinary, no matter how interrupted, are regulated by the following tables, according to Articles No. 77, 80, 81 and 82 of Mercantile Marine Code:

"A"-TABLE OF THE FEES FOR THE VISIT TO THE HULL.

KIND	Gross Tonnage.	Compen Engin Shipb	Compensation to		
VESSELS.	Tons.	Visit to Vessels Ashore.		the Captain.	
Sailing Vessels.	From 1 to 200 201 to 500 501 to 800 801 to 1,200 1,201 and over.	1.73 7-10 2.31 6-10 2.89 5-10	2.89 5-10 3.86	\$0.77 2-10 1.15 8-10 1.54 4-10 1.93 2.31 6-10	
Steam Ships.	" 1 to 200 " 201 to 500 " 501 to 800 " 801 to 1,200 " 1,201 to 1,800 " 1.801 and over.	1.73 7-10 2.31 6-10 2.89 5-10 3.86	1.73 7-10 2.31 6-10 2.89 5-10 3.86 4.82 5-10 5.79	0.96 5-10 1.35 1-10 1.73 7-10 2.31 6-10 2.89 5-10 3.47 4-10	

"B"-TABLE OF THE FEES FOR THE VISIT TO THE ENGINE.

For	engine	fron	1 to 200 horse-power\$2.89 5-10
			201 to 500 horse-power 3.86
••	"	"	501 to 800 horse-power 4.82 5-10
**	**	44	801 to 1,500 horse-power 5.79
44	16	**	1,501 to 2,000 horse-power 6.75 5-10
		**	2,001 and over, horse-power 8.68 5-10

For visits to vessels under average in the adjustment of which the judicial authority has intervened, the fees are regulated by the tribunal, according to the requirements of each particular case.

TONAWANDA LUMBER TRADE.

The present week will no doubt witness the closing of navigation so far as Tonawanda is concerned. The some of the whalers believe that it is possible to sail lumbermen, and in fact all of the shippers, did their directly to the Pole during favorable seasons. best to get their cargoes shipped last week, and nearly every day found the canal well filled with boats. Figuring that the canal will not be closed by ice before December 1, the required ten days' time to make the run to tide water will be needed to get all the boats down that leave Tonawanda as late as Saturday, but it is not the north coast of Alaska have been amusing themselves expected that many cargoes will be shipped after the by "stuffing" an innocent. The whaling grounds of middle of the week. The canal boats have not yet be- the north coast of Alaska have been sailed over quite gun to tie up for the winter. The boats that expect to thoroughly as far east as Point Barrow, where it will get cargoes to take them east, to remain there over be remembered the United States maintained an obwinter, or to get short loads to finish up the season servation station for a number of years. The whalers with, will clear in a few days. The lake craft are be- have been in this part of the Arctic Sea for many years, ginning to tie up for the winter, and already many have and have gone eastward as far as possible every sumbeen put into winter quarters. A few of the harbor mer. Naturally they have also gone northward after tugs have also been laid up.

The marine season at Tonawanda has been better than last year, and, so far as the canal is concerned, it sail as far north as 83 degrees, and that in favorable has been better than for many years past. The lake seasons they might sail straight to the Pole. Neither freights have not been so very high, but there has been a large amount of freight brought down during the season just ended.

SHELBAK AS A NAVEL MILISHER.

[From the Army and Navy Journal, Nov. 14.] U. S. S. PORTSMOUTH, Nov. 2.

Editer "Army and Navy Journel:"

Dere Ser :- I jumped the Texas last Sunday and am now a navel milisher on the old Portsmouth, witch resides in hoboken and is flagship of the Japane Jersyliers and has 2 skiprs. The boss skipr he tort the Japs orl the gunry they nose fer witch they gave him the ordure of the risin son of a gun, so that he dont do nuthin now but hav his fotygraf taken twise a weak. The assisten skipr kepes the skeeters offer the boss skipr wen hes abord. Ime a lootinint.

Wot I wanter no now is how sumboddy is goin to be got to giv this ship sum silver witch she ant got enny and bein a wardroomer I can get sum good outer it now witch I cudnt on that cusd Texas, speshly wen I was in the brig.

Our navvergayter witch he sels ladis furnishins in Nu brunswik rote to Portsmouth, n. h., and Portsmouth, virginyer, and Portsmouth, oio, and Portsmouth, misshygin, and Portsmouth, N. C., and Portsmouth, inglint, and Wakymatsu, Japan, witch the boss skipr ses menes portsmouth without no luk.

That yanky Portsmouth sed that the stait of nu Hamshere had alredy guv a silver shavin set to wot is left of Admul Jakmella's flagship, witch is tide up to Bellyview horse spittle, and if evry town was to be stuk in this way thared soon be nuthin in the state but stones and farm obtained a report from Chas. M. Caughy, U. S. Consul morgygis. I dono wether I has speld the admuls name rite, but ennyhow thats the way the Princis Ulally did

> Portsmouth, va., rote that it hadnt made nuthin outer the navy since before the wah and wud like enny old close we had to spair. Portsmouth, inglint, didnt send no anser at orl, and I dono wot was in the letr from Wakymatsu, caws the boss skipr cant be got to translate it. As for them other Portsmouths they got the navvergaytor into a lot of trubbel with Anthny Comstok, hoo went fer him on spishu of tryin to sell grene goods.

> It ant no use telin us to get a subscripshun. we tride that and it busted. The perchasin comity went to Nuark and stade a weke and cum bak with nuthin but the malaryhoea and one nickle plaited coktale mixer witch for all this ships compny is ridiklis. Besides a man from the Nuark Hotle cam and clamed it-the mixer I mene.

> We are now goin to advertis that ennybody givin us silver tabel ware can hav this ship named aftr him and if that dont work we is stumped. Ever yures,

> > T. AP. CATESBY SHELBAK,

Loot. Nu Jersey navel milisher.

S. P.-Execeutiv osfr USS Texas dere james plese send me them blu musterin trousrs wich i left in my wier loker.

ARCTIC EXPLORATIONS.

Prof. L. L. Dyche, the Kansas scientist who has just returned from a visit of five months to northern Alaska, reports that from his observations and from conversations he has had with whaling captains, he is of the opinion that the route by way of the north coast of Alaska is probably the best route to the North Pole. He says old whalers informed him that it is sometimes possible to sail as far north as 83 degrees, and that

These expressions of an amateur Arctic explorer who has not gained his knowledge of the frozen north by experience in the expeditions which took Lieut. Peary to Greenland, and returned to that frozen country to bring him home, indicate that some of the whalers on whales whenever there was open water to sail in. But no whaler has ever asserted that ships can sometimes did those who lived at the Point Barrow station for several years reach any such conclusions as a result of their experience.

TRANS



ESTABLISHED 1878.

PUBLISHED EVERY THURSDAY BY THE MARINE RECORD PUBLISHING CO.,

> [INCORPORATED.] GEORGE L. SMITH, President.

C. E. Ruskin,	5 311 a		5. 8		Manager
Capt. John Swains	on, -	of the same	No.	na syfni	Editor
Thomas Williams,	Chicago	· Selection	et de q		Associate

CLEVELAND, WESTERN RESERVE BUILDING.

CHICAGO, ROYAL INSURANCE BUILDING

SUBSCRIPTION.

One copy, on year, postage paid,	0.197	\$2.00.
One copy, one year, to foreign countries, .	-3.	\$3.00.
INVARIABLY IN ADVANCE.	KING !	tor alter

ADVERTISING.

Rates given on application.

All communications should be addressed to the Cleveland office.

THE MARINE RECORD PUBLISHING CO., - - CLEVELAND. Western Reserve Building,

Entered at Cleveland Postoffice as Second-Class Mail Matter.

CLEVELAND, O., NOVEMBER 19, 1896.

THE SEASON'S BUSINESS.

Taking the season's business all through, there ought to be a fair dividend left for the best managed fleets, although, on the other hand, it is quite certain that slovenly managed vessels would clear nothing, and perhaps be at a slight loss on many charters. As some one pertinently observes, this has been a season of low range of lake freights, cargo record breaking, new and larger ships, deeper water in the connecting rivers and channels between Lakes Superior and Huron, and a freight movement on the whole largely in excess of all previous years.

Those who had the keenness to charter for the season came out at the right end of the horn and may congratulate themselves on hitting "pot-luck," though we venture to say that better things will be looked for next year, and that figures will be held at a firmer figure than has obtained on "wild" charters this season.

WRECKS, LOSSES AND GROUNDINGS.

Although the fall season is upon us the list of casualties is remarkably small and of but little moment outside of underwriting circles. Lat us take the case of the large wooden steamer Australasia, and from Sturgeon Bay it is learned that, like "Billy Patterson's" horse, she is liable to live again; and besides this, no lives were lost when she did strand and burn on Lake Michigan. Furthermore, her machinery and other equipments will be salved. The same thing occurs with the Wilson Line steamer Wallula, stranded and on fire with ore near Conneaut, on Lake Erie. She was pronounced a total loss; now it is found that it is questionable if she will become even a constructive total loss. Anyhow, she is in port again and her cargo being discharged. The Canadian steamer Acadia, beached on Michipicoten Island, Lake Superior, is perhaps a goner, as at least so the underwriters' agents report; but there ought to be a certain amount of salvage even there, and in any case the vessel was of an old type and placed at a comparatively low insurance valuation. The smaller and old-time tonnage represented by the Senator Blood castaway on Goose Island, or the Brenton at Cleveland breakwater, where no loss of life occurred, are really trivial casualties. So are the several groundings, durto ring the week, of rather important tonnage, all of which can be remedied at the cost of a few thousand dollars. On the whole, congratulations are in order when it is considered that so few casualties are to be reported at this season of navigation, and it is our sincere wish that time. even still fewer may take place during the winding up of the season. The facts, however, call us to observe -so that much credit is due to the men who are actively en- Association and other British marine corporations as garged in handling and sailing lake vessel property for strenuously objecting to the carrying out of rules emthe stormy weather preceding the close of navigation. tee. The objections seem to lie principally on the

NAVIGATION COMMISSIONER'S REPORT.

The Commissioner of Navigation, in his annual report just given to the public, refers prominently to the subject of our merchant marine and the adoption of a free ship bill, and urges that a suitable measure be brought before Congress for immediate passage.

Japan now threatens our maritime interests on the Pacific. A transpacific steamship line has just been established by the Japanese to the United States, and the service will be extended with the aid of American capital. In 1880 the tonnage of American vessels entering the United States from the ports of Asia and Oceanica was 283,395 tons; of foreign vessels, 442,251 tons. In 1895 American tonnage had increased but a trifle, to 308,481 tons, while the foreign tonnage had leaped to 657,207 tons.

In his argument the Commissioner draws this picture: "The large and profitable carrying trade, once conducted between Asiatic and European ports by American vessels, which seldom entered American ports, has almost entirely passed away. We have already seen the American flag almost wholly disappear from the Atlantic, save as borne by the mail steamers of the American line, and the figures show that the carrying trade of the Pacific is s'ipping from us." Referring to Senator Fry's bill now before Congress to impose 10 per cent additional discriminating duties on all cargoes brought into the Unites States by foreign vessels, the Commissioner cites the enormous importation of tea and coffee, aggregating in 1895 \$125,000,000, and points out that the proposed tax would be a tax on the consumers of these articles. Of coffee from Brazil, \$54,000,000 came in foreign vessels and the proposed tax would equal \$5,400,000, or sufficient, Mr. Chamberlain says, on coffee alone, to subsidize steamship lines including 25 steamers equal to the St. Louis or St. Paul, or a much larger number of the class required for South America, Asiatic and African trade.

The statement is an important one that within the last five years Japan's sea-going steel steamers have increased from 13 to 27,701 tons, to 53 to 106,383 tons. The number of American steel and iron steamers on the Pacific coast is 43 of 68,625 tons.

The Republican party is pledged to favor American vessels as expressed in the platform adopted at St. Louis. We favor restoring the American policy of discriminating duties for the upbuilding of our merchant marine, and the protection of our shipping in the foreign carrying trade, so that American ships-the product of American labor, employed in American shipyards, sailing under the Stars and Stripes, and manned, and officered and owned by Americans-may regain the carrying of our foreign commerce."

It does not seem to us that Commissioner Chamberlain has properly caught on to the duties of his office, he has acted more as a political partisan than a government officer and it is a pity that several of his predecessors were imbued with the same or a similar spirit. However, his time is now short, his successor may have a better technical knowledge, and in the event of Mr. Chamberlain returning to his duties of the past four years we may hope that he will be more conversant with maritime affairs and in a position to publish something of interest in his annual report.

INTERNATIONAL "RULE OF THE ROAD."

The International Maritime Congress, held in Washington, was an excellent meeting from every standpoint, but we must admit that from the present outlook it cannot be termed an unqualified success.

The rules of steering and sailing known as the "White bill," and since adopted on the lakes, prove that the talent assembled at Washington six years ago were hardly capable of prescribing rules for the safe navigation of all waters, and it would appear that even the rules for coast and ocean service were and are at variance with the best practice of navigation, as the greatest maritime power seems to have found some difficulty in taking aboard the combined discretion of other nations more or less interested in affairs mari-

Notably, we may call attention to the Liverpool Ship Owners' Association, the Mercantile Marine Service their care and skill in keeping clear of trouble during bodied in the resolutions of the International Commit-

sound signals advocated for use in fog, and they are pronounced as very unreliable and dangerous to navigation, although the British Board of Trade, which is much like our steamboat inspection service, overrule the objections and desire to adopt the new suggestions. However, with that pertinacity, if not obstinacy or bull-headedness proverbial with the English, the sailing element buck hard against the proposed changes, and it is possible that the work of the International Maritime Congress will be stulfified in many respects.

The British were no doubt the prime movers in having the Congress of Nations held at Washington. They sent, or should have sent, representative men to that congress, and now we find that after a lapse of several years they kick against their own action and representatives. This is, of course, essentially British, yet it would now be in order for all other nations to endorse the rules as recommended, and thereby force the English into compliance therewith, if the rules are good.

The way to do a thing is to do it, and when a right path is pointed out it ought to be pursued, regardless of minor or even major objections. On the other hand we would not advise hasty action on so important a subject. Further, we may say that undue action was taken on the "White bill," and a rod has been put in pickle for the people who framed and passed it.

NIAGARA, or at least a portion of it, is harnessed and its power transmitted to Buffalo. The past week is one of historical interest not only to Buffalo, but to the entire world. The older seaport countries with their natural rise and fall, or ebb and flow of tide waters, may now learn something to their educational and mechanical advantages. The officials of the Cataract Power & Conduit Co., and the White-Crosby Co., which constructed the transmission line, should be given much credit on the successful completion of the line and plant necessary for connecting this great power with Buffalo. TO GEOLOGICAL PROPERTY OF THE PROPERTY OF THE PROPERTY OF

THE thanks of THE RECORD are due to the U.S. Hydrographic Office for a copy of the latest edition of a chart on the Arctic regions, which includes the discoveries of Dr. Nansen. We are led from time to time to speak in the highest terms of the productions of the Hydrographic Office, but C. D. Sigsbee, Commander, U. S. N., hydrographer, at present detailed in charge of the office, distances all of his predecessors in making the best use of the professional skill at his command, as well as putting the same into record shape in the form of graphical delineations.

WEEKLY FREIGHT REPORT.

Now comes in the season when winter storage is calculated in grain freights, and the figures seem larger and better than has been reported for some time past; but, considering the service rendered, there is little further compensation for the shipowner than has been paid all season, which, we are sorry to say, amounts to only a neat modicum of his outlay.

Chicago grain rates still hold at 134 cents on corn, and 2 cents on wheat to Lake Erie. Duluth now offers 23/4 cents on wheat to Buffalo, and Fort William, 3 cents; with a firm market all round, which must eventuate in a further raise of figures.

The ore carrying situation is not much improved since our issue of last week, and the 65-cent Escanaba rate is still quoted; but there has been ice up north, or rather, freezing weather enough to harden the ore in the pockets so as to detain boats for a length of time, which makes chartering at the above figure unprofitable. At the head of the lakes, 90 cents is offered.

Coal freights have improved somewhat, as usual at this time of the year, and 40 cents on bituminous has been offered freely from Ohio ports to Lakes Michigan or Superior, and a cargo from Ashtabula to Chicago paid 50 cents. In the anthracite or Buffalo charters the rate has also been advanced, and it is now quoted 30 cents, Duluth; 40 cents, Lake Michigan ports.

Canal rates from Buffalo are held steady at 4 cents on wheat, 35% cents on corn, 21/2 cents on oats, 35% cents on rye, 31/4 cents on barley, and 4 cents on flaxseed to New York.

Lumber freight rates steady at \$2.25 to New York, with a land and \$1.75 to Albany.

Now is the time to subscribe for THE MARINE RECORD; \$2 per year.

COMMISSIONER OF NAVIGATION-ANNUAL REPORT.

Despite the fact that there is no probability of either this Congress or the next passing a free ship bill, the Commissioner of Navigation in his annual report refers prominently to the subject and urges the necessity for the passage of such a measure. He invites attention to the fact that our maritime rank on the Pacific is now threatened by a new rival, Japan, which has just established a trans-Pacific steamship line to the United States, and with the co-operation of American capital, is preparing to rapidly extend the service. In 1880 the tonnage of American vessels entering the United States from the ports of Asia and Oceanica was 283,395 tons, of foreign vessels 542,251 tons. In 1895 American tonnage had increased but a trifle, to 308,481 tons, while the foreign tonnage had leaped to 657,206 tons. In his argument the commissioner says: "The large and profitable carrying trade once conducted between Asiatic and European ports by American vessels, which seldom entered American ports, has most entirely passed away. We have already seen the American flag almost wholly disappear from the mid-Atlantic, save as borne by the mail steamers of the American line, and the figures show that the carrying trade of the Pacific is slipping from us."

Before it is altogether lost Commissioner Chamberlain suggests that Congress inquire into the conditions of trans-Pacific transportation. Within the last five years Japan's sea-going steel steamers have increased from 13 of 27,701 tons to 53 of 106,383 tons. The number of American steel and iron steamers on the Pacific coast is 43 of 68,624 tons.

Opposition is expressed at some length to the proposition found in Senator Frye's bill now before Congress to impose 10 per cent. additional discriminating duties on all cargoes brought into the United States by foreign vessels. It points out that for over 80 years the United States have followed the policy of reciprocity in shipping, and declares that every other maritime nation of considerable rank has adopted and now pursues the same policy.

"Our total imports for 1895 are valued at \$731,969,965, of which \$590,538,362 were brought in foreign vessels. The discriminating duty bill would," the commissioner says, "put an additional charge of \$59,100,000 on our international exchange based on the figures for 1895, an amount approximately equal to our entire ocean freight bills on imports and exports."

In arguing against this tax the commissioner cites the enormous importations of tea and coffee, aggregating in 1895\$125,000,000, and points out that the proposed tax would be a tax on the consumers of those articles. Of coffee from Brazil \$54,000,000 came in foreign vessels, and the proposed tax would equal \$5,400,000, or sufficient, Mr. Chamberlain says, on coffee alone to subsidize steamship lines, including 25 steamers equal to the St. Louis or St. Paul, or a much larger number of the class required for South American, Asiatic and African trade. Much of the report is given to the consideration of this one question, and the commissioner reaches the conclusion that the policy of discrimination "always has been and always will be thwarted by retaliation."

A CHESTER CONTRACT.

The bids for the new steamship for the Old Dominion Line, which has been in contemplation for some time, were opened on Saturday at the office of the company in New York. The contract was competed for by several of the leading shipbuilders, but the lowest and best bid for its construction came from Roach's shippard, Chester, Pa., and the contract will be awarded to Mr. Roach. This action was taken by the executive committee on Saturday, subject to the approval of one member of the committee, who was not present at the meeting.

This will be very good news to the workmen at the shipyard, as it means the disbursement of between \$200,000 and \$250,000 in wages in this city during the next nine months. Mr. Roach has had inquiries for nearly \$1,500,000 worth of work since the election was decided. The new ship, which will be No. 291 at the shipyard, will be about 320 feet in length and 45 feet beam. She will be much like the Jamestown and Yorktown in construction and appearance, but a trifle larger, and her joiner work will be even more expensive than that which has made these two splendid ships the admiration

of shipping authorities everywhere. The work will be pushed upon her, as she is to be completed by August 1, 1897, and the Chester shippard was the only firm which would undertake to do the work on time.

THE WELLAND CANAL.

The government employes on the canal are getting anxious, as the end of the season approaches, for their positions, the general belief being that a clean sweep of Tory office-holders will be made by the new regime. Already one bridge tender has been made to walk the plank, but his dismissal is said to have nothing to do with politics. There are hundreds of applications in to the local committee, and there is likely to be considerable trouble in satisfying all.

ANOTHER AIR SHIP.

Leon La Roche, an inventor of Hoboken, N. J., is at work on an airship which, he says, will cross the American continent in two days, and the Atlantic ocean in three days. In the front portion of the apparatus there will be a balloon made of rubber, large enough to hold five men, provisions for a week and an electric battery which will furnish both light and the propelling power. The steering gear will be in the rear of the machine. Leon says several of his friends will accompany him upon the trial trip.

THE OBNOXIOUS LIBEL LAWS.

The excutive committee of the national board of steam navigation met at Columbus on Tuesday for the purpose of outlining a plan of procedure looking towards relief from certain measures that are deemed antagonistic to marine interests, among which is the libel law. C. W. Woolsey of New York, chairman of the executive committee, called the meeting to order. There were present D. B. Blackburn, W. W. O'Neill and W. J. Wood, of Pittsburg; Henry Leyhe and Hunter B. Jenkins, of St. Louis; E. J. Carroll, of Vicksburg; F. A. Laidley and F. A. Rothair, of Cincinnati. After much discussion the committee decided that the libel law should be so changed that irresponsible persons will not have the power to tie up a steamer for unjust claims. The matter will be referred to the legislative committee of the board with instructions to bring the matter prominently before Congress. The needs and requirements of western steamboat service were discussed, and for some time discussion centered upon the bridge question. The committee outlined a plan in reference to this matter, which will be discussed at the next meeting.

DULUTH-LIVERPOOL WHEAT.

A statement showing the market value of No. 1 hard wheat at Duluth on October 23, 1896, as compared with actual sale of 8,000 bushels Duluth No. 1 hard wheat on same day at Liverpool, for delivery in London c. i. f. (cost, freight and insurance), made by the railroad and warehouse commission, November 9, 1896, as taken from the "American Elevator and Grain Trade."

October 23.

Cents. to

October 23.	Cents.
Duluth quotation for No. 1 hard, 713/8 cents	71.38
Duluth elevator and inspection charges	.85
Lake freight and insurance, Duluth to Buffalo	3.00
Elevator charges and commission at Buffalo Canal freight and insurance, Buffalo to New	1.00
York Elevator charges, etc., in New York, viz., demur-	3.00
rage, towing, transferring and trimming Ocean freight and insurance, New York to	1.50
London	
Shrinkage in weight, Duluth to London	.50
Cost in London, c. i. f	93.25
October 23.	
Sold in Liverpool for London delivery, 1,000 quarters (8,000 bushels) Duluth No. 1 hard wheat at 32s. 9d. per quarter (480 pounds), or 981/4	
cents per bushel	
Difference	5.00

Showing that on that day the market in London was about 5 cents above that of Duluth.

Statement of receipts and shipments of wheat at Boston, New York, Philadelphia and Baltimore, for the month of October, 1896, as compared with corresponding month in 1895:

Receipts—October, 1896, 9,080,372 bushels; October, 1895, 4,658,932 bushels; excess, 1896, 4,421,440 bushels.

Shipments—October, 1896, 4,769,962 bushels; October, 1895, 2,930,942 bushels; excess, 1896, 1,839,020 bushels.

NATIONALITY OF THE NAVY.

More than 72 per cent. of the enlisted men of the navy are now American citizens, according to the statement of Admiral Ramsay, chief of the bureau of navigation, in his annual report. During the year 895 men and 146 apprentice boys deserted, by far the greater number of desertions being at home ports. The record for long distance cruising is now carried by the old-time cruiser Essex, which sailed 16,930 miles during the year. The Newark came next with 14,765 miles to her credit and singularly enough the third place is held by the Monterey, never designed as a cruising vessel, which steamed 13,195 miles.

The report of the superintendent of the naval acadamy, which is appended to Admiral Ramsay's report, contains the usual recommendation as to the provision of two sailing vessels for training the cadets in seamanship. The superintendent endeavors to meet the argument that such training in the use of sails is out of date by the contention that it nevertheless educates the nerves and brain and inculcates the habit of command. He also has endeavored to stimulate the interest of the cadets in marine sports; sailing, rowing, etc., to divert their attention from football, baseball and such games, which he regards as unfit for sailors.

One of the most important recommendations is that a post-graduate course of training be adapted at the naval academy to place the institution on a footing with foreign naval schools. It is also recommended that the entrance age of cadets be reduced to 15 years, that the course of studies be reduced from six to four years, and that after a three years' cruise the cadets be required to take the post-graduate course.

NOTICE TO MARINERS.

SAND BEACH HARBOR OF REFUGE LIGHT STATION.

East Entrance South Light and North Entrance West Light.—Notice is hereby given that on or about November 20, 1896, the illuminating apparatus of these two lights at the entrances to Sand Beach harbor of refuge, west side of Lake Huron will be changed, each from a tubular lantern to a lens lantern, to increase their range of visibility.

Each light will illuminate 270° of the horizon, and will be visible from all points of approach from both the lake and the harbor, excepting that the southerly light at the easterly entrance to the harbor will not be visible to the westward of N. 13° W. (N. by W. 1/8 W.) nor to the southward of N. 77° E. (ENE. 7/8 E.); and the westerly light at the northerly entrance will not be visible to the northward of N. 55° E. (NE. 7/8 E.) nor to the westward of S. 35° E. (SE. 7/8 S.)

By order of the Light-House Board:

JOHN G. WALKER,

Rear Admiral, U. S. Navy, Chairman.

Office of the Light-House Board,

Washington, D. C., Nov. 16, 1896.

INSPECTION OF VESSELS.

The always well-informed Detroit Evening News contained the following editorial note this week:

"There is no lesson to be drawn from the fate of the steamer Waukesha and her crew which has not been enforced during the autumn gales of every season of late navigation for many years. And such lessons will continue to be given until some of the vessel owners who put crews on such floating coffins have been made to realize that the filling of their own pockets is not the most important thing in the world. In the meantime the public and the friends of the dead men can only wonder what is gained by paying public money sto an inspector of hulls. There is hardly a branch of government from city to nation that does not tax the people for an immense amount of inspection which doesn't inspect, and it will go on as long as the public continues to be good-naturedly indifferent. It is safe to say, that there are men on the lakes to-day in boats no better than the notoriously unseaworthy. Waukesha was a week ago, and if they all get ashore the God of storms alone will be entitled to thanks." . apitleuzso ! Bivit!

It is rather singular that the news man is ignorant of the fact that the government inspector of hulls has nothing whatever to do with sail or tow barges, the service is chiefly one of steamboat equipment inspection, and the licensing of officers, but even in the latter case no license or other compulsory qualification is required to take charge of a lake schooner. When a commissioner of navigation is appointed who will seek counsel or take advice on matters of which he is evidently ignorant, then we may hope to see a recommendation introduced, sail and tow, as well as steam being brought under some sort of an inspection whereby their officers may be licensed men, and the condition as well as the equipment of the craft may be duly vouched for.

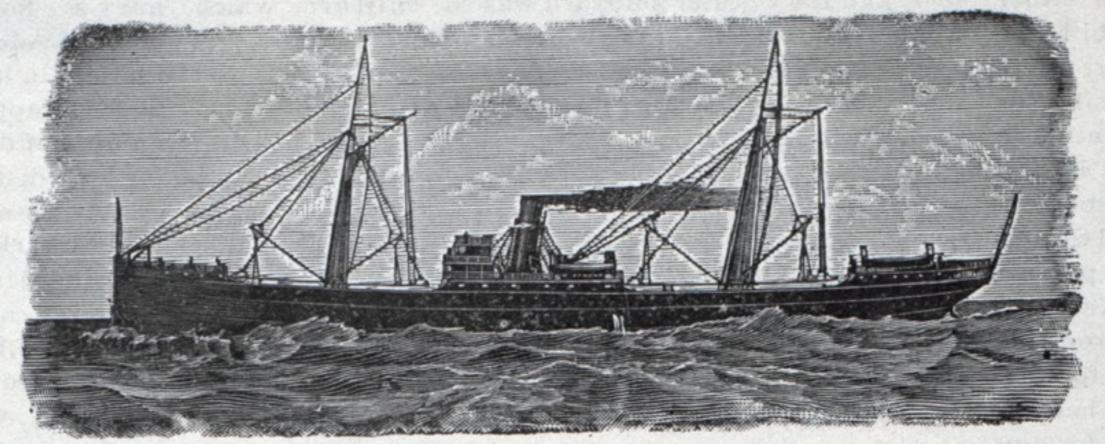
FOR THE LAKES PRICE \$1,50.

FOR SALE BY

THE MARINE RECORD,

CLEVELAND. WESTERN RESERVE BLDG.,

F. W. WHEELER & COMPANY,



IRON, STEEL AND

WOODEN SHIPS, FOR LAKE OR OCEAN SERVICE.

West Bay City, Mich.

F. W. WHEELER, Prest. E. T. CARRINGTON, V.-Prest C. W. STIVER, Secretary & Treasurer.

MARINE ENGINES, DETROIT, MICH.

INCORPORATED 1794

Insurance Company of North America.

CAPITAL, PAID UP IN CASH, ASSETS,

\$3,000,000.00 9,487,673.53

CHARLES, PLATT, President. EUGENE L ELLISON, 2d Vice President.

GEORGE H. McFADDEN, Vice President. GREVILLE E. FRYER, Sec'y and Treas. JOHN H. ATWOOD, Assistant Secretary.

GEORGE L. McCURDY, MANAGER. LAKE MARINE DEPARTMENT, CHICAGO, ILL.

AND INLAND INSURANCE._

Atlantic Mutual Insurance Co.,

Organized 1842. Office 51 Wall Street, NEW YORK.

Insures against Marine and Inland Transportation Risks and Issues Policies making Loss Payable in England.

Assets over \$10,000,000 for the Security or its Policies.

The profits of the Company revert to the assured, and are divided annually upon the premiums terminated during the year; thereby reducing the cost of insurance. For such dividends, certificates are issued bearing interest until ordered to be redeemed, in accordance with the charter.

J. D. JONES, Pres. W. H. H. MOORE, Vice Pres. A. A. RAVEN, 2d Vice Pres. J. H. CHAPMAN, Sec.

LIFE-SAVING APPLIANCES AGAIN.

To the Editor of The Marine Record:

NEW YORK, Nov. 17.

I have noticed a communication in your issue of the 12th inst., signed by "Life Line," in which he asks: "Is it not time that something was done for the preservation of the lives of officers and crews of tow barges and schooners? Surely the lives of those on sailing vessels are as valuable as those on passenger and freight steamers, etc."

He asks that all vessels be compelled alike to carry life rafts, life buoys, life preservers and all life-saving appliances to avoid the risk of losing lives, and cites the case of the recent loss of the tow barge Sumatra off Milwaukee, which vessel was not supplied with any lifesaving appliances. He asks in conclusion that owners of tow barges and sail vessels, in the cause of humanity, at once supply their vessels with good and sufficient life-saving appliances. He also says he hopes that "all in behalf of the end he has in view."

ances, or do so voluntarily themselves, as they are op. stage." posed as a unit to any expenses, no matter how valuable it may be for the purpose of saving life. He also must know that few, if any, life-saving appliances would be used now in any vessel, passenger or freight, unless required by the Board of Supervising Inspectors of Steam Vessels.

I hope, however, that his appeal may have some good result, and that at least it may reach the tender hearts of the Board of Supervising Inspectors who are ever so vessels. LIFE PRESERVER.

A SINGULAR EBB OF WATER.

A rather singular phenomenon is reported by the Sandusky Register this week, relative to an ebb of water brought about by surface action, as follows:

"The people living on the shore of Sandusky Bay could hardly believe their eyes when they arose last Friday morning and found the bay practically dry, the strong wind of Thursday afternoon and night having

and it was a novel sight Friday morning to see the vessel out there with no water within half a mile of her. vesselmen who read this epistle will interest themselves Among the curiosities brought to light was a large anchor and chain cable over near Eagle Island. The In reply I will simply say that I fully and heartily en- anchor is not of modern design, and is thought to have dorse the views of "Life Line," the writer, but he ought been lost by one of the British gunboats before or after to know, as every one knows, that no vesselman or the battle of Fort Stevenson. The water commenced owners of vessels will interest themselves in making it flowing back into the bay about 6 o'clock Friday mornobligatory to supply their vessels with life-saving appli- ing and by 10 o'clock that night had reached its normal

OBITUARY NOTICE.

Capt. George W. King, aged 66 years, died last Saturday at his home in Bay City, after an illness of about three weeks' duration, and was buried on Tuesday.

Capt. King resided in West Bay City for a period of 43 years, and was closely identified with Lake Huron vessel interests. So far back as fifty-three years ago Capt. King commenced sailing, and worked his way ready and willing to adopt such measures as will pro- from cabin-boy to master, afterwards owning quite a tect the lives of passengers and crews of all kinds of large lumber fleet. During about thirty years of his life he was in the tug business, and all vesselmen in the Lake Huron trade knew and appreciated Capt. King as an earnest, upright man, with whom it was a pleasure to do business.

BUREAU VERITAS FOR 1896-97.

The Bureau Veritas shipping lists for 1896-97, their 27th year, are now in two handsome volumes. The volume comprising the steamer repertoire contains an alphabetical list of all owners, and steamers and steam-

blown all the water in the lake, says a correspondent ship companies, their addresses and telegraphic adwriting from the head of the bay. It was a peculiar dresses, and a list of their steamers, with tonnage; an occurrence, but old settlers down there say that it hap- index of steamers, arranged according to tonnage, pened once before, several years ago. The bed of the showing at a glance all those of the same size; drawbay, after getting beyond the sloping banks, is nearly ings representing the various types of vessels; a table as level as a floor, at least at the upper end of the bay, for converting English measurements into meters; a and Fred Jackson and another gentleman, who were list of the principal dry-docks, gridirons and patent down there duck hunting at the time, walked from the slips in the world with dimensions, etc. This is in addi-Dew Drop resort over to Eagle Island without encoun- tion to the regular information presented in each tering more than eight inches of water in any place. volume, comprising the names of all vessels and mas-Large quantities of fish had been left by the receding ters and builders, tonnage and detailed description, water and could be picked up anywhere, and pound nets both sail and steam, besides which each volume has the well filled with fish were left high and dry so that fish- general statistics of each flag, a list of all vessels, the ermen could not get to them without going out in names of which have been changed, an alphabetical wagons. The sailing vessel Two Brothers, of San- list of signal letters, enabling any vessel to be identified dusky, was anchored out in the bay receiving a load of by her flag, and much other information that makes cordwood, which was being taken out to her on lighters, these books of great value on board ships and at signal stations, as well as to the shipping public in general.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD by George F. Stone, Secretary Chicago Board of Trade, November 14, 1896:

CITIES WHERE STORED.	Bushels.	Bushels.	Bushels.	Bushels.	BARLEY. Bushels
Albany	580,000 1,812,000	50,000 1,271 000 341 000	100.000 1,618,000 153,000	80.000	30,000
Buffalo ,	1,902,000	1,094,000	631,000	255,000	1,173,000
Chicago	15 571,000	5,670,000	3,282.000	831,000	164.000
Cincinnati Detroit	1,000 430,000	4 000 37,000	12.000 63,000	5 000 67,000	42,000 72,000
Duluth and Superior	4,994.000	2,000	529,000	335,000	845,000
Indianapolis Kansas City Milwaukee	197,000 474,000 415,000	171,000 34,000 47,000		8,000 102 000	141,000
Minneapolis Montreal	18 085 000 554.000 8,091.000	10,000 49,000 5,166 000	294,000	8 000 16,000 475,000	16,000 54,000
swego	72,000	33,000 65,000	32 000	32.000	1,099,000 10,000 160,000
Philadelphia	601.000	1 183.000 193,000	226.000	8 000 57.000	13,000
roledo	775,000	148,000		101,000	9,000
Coronto	240.000		60.000		77,000
On Canal	504,000 2 496,000 47,000	1,981,000	854.000	161,000 167,000	
Frand Total	61,008.000			2,708,900	6,250,000
legs date	60,326,000	4,306 000	5,972 000	1,287,000	4,047,000

RETARDERS IN BOILER TUBES.

One of the papers read before the St. Louis meeting of the American Society of Mechanical Engineers referred to the effect on the boiler efficiency of what the author, use. a Mr. J. M. Whitham, of Philadelphia, terms "retarders" placed in the smoke tubes of a multitubular boiler. These "retarders" were made of loosely-fitting strips of No. 10 sheet iron, running the whole length of the tubes, and twisted to a pitch of 10 ft., or making two entire is strong. convolutions of the length of the tube. The boilers were of the ordinary plan multitubular externally fired type, such as are used in the United States. The conclusions arrived at by the author as a result of his tests, and given in the paper are as follows:

- 1. Retarders in fire tubes of a boiler interpose a resistance varying with the rate of combustion.
- 2. Retarders result in reducing the temperature of the waste gases, and increasing the effectiveness of the heating surface of the tubes.
- 3. Retarders show an economic advantage when the boiler is pushed, varying in the tests from 3 to 18 per cent.
- 4. Retarders should not be used when boilers are run very gently, and when the stack draught is small.
- 5. It is probable that retarders can be used with advantage in plants using a fan or steam blast under the fire or a strong natural or induced chimney draught, when burning either anthracite or bituminous coals.
- 6. Retarders may often prove to be as economical as are economisers, and will not, in general, interpose as much resistance to the draught.
- 7. Retarders can be used only with fire tubular boilers.
- 8 The economic results obtained on the boiler tested

are ideal, showing that it was clean, the coal good in had been in his power. He saluted in fine naval style. quality, and the firing skillful. With retarders, the tubes are more effectively cleaned than without their ters!"-Tid Bits.

9. The tests prove that the marine practice of using retarders is good, and that the claim often advanced that they show from 5 to 10 per cent. advantage holds, whenever the boiler plant is pushed and the draught

MUST OBEY ORDERS

Capt. Bliss was, like all seamen, a strict disciplinarian, and his crew respected him beyond measure. Not one of them would have dreamed of interpreting a command otherwise than according to the strict letter of the law; things must be done "ship-shape" under his

One day, while the ship was at a certain port, the captain gave a dinner to some town acquaintances, and as the resources of the ship were not great some of the sailors were deputed to wait on the table to reinforce the insufficient number of stewards.

As these men were not used to such work, each one was told exactly what service would fall to his share.

The hour came and the dinner went merrily on. Presently, however, one of the ladies wanted a piece of bread. There was none very near her and the finely disciplined stewards seemed to be quite oblivious to her need. She turned her head and spoke very softly to the man at her elbow.

"Bread, please," she said.

He looked regretfully at the bread and then at her. It was evident that he would fain have helped her if it

"Can't do it, ma'am," said he. "I'm told off for 'ta-

PROPOSALS.

U. S. ENGINEER OFFICE, 366 Milwaukee street, Milwaukee, Wis., Oct. 27, 1896. Sealed proposa's for: Kewaunee Harbor, Wis., 425 feet pile pier extension; Manitowoc Harbor, Wis., 500 feet crib pier extension; South Milwaukee Harbor, Wis., 180 feet pile pier extension; Racine Harbor, Wis., 250 feet crib pier extension; Kenosha Harbor, Wis., 250 feet crib pier extension; will be received here until 12 o'clock noon November 27, 1896, and then publicly opened. Information furnished on application, GEORGE A. ZINN, Capt. Engrs.

QUEEN CITY Hydraulic Steerer.

The best and most powerful Steerer for Tugs, Steamers, Etc.

MANUFACTURED BY

QUEEN CITY ENGINEERING CO., BUFFALO, N. Y.

Write for Prices and References.

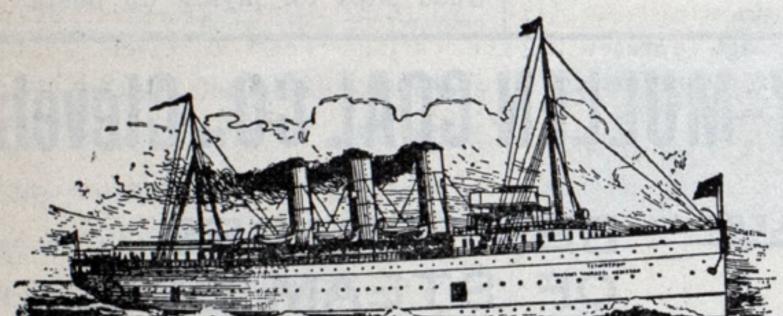
TOBIN TRADE BRONZE.

Tensile Strength, one inch cold drawn rod, upwards of 78,000 lbs. per square inch. Torsional Strength equal to the best Machinery Steel. Non-Corrosive in sea water. Can be forged at cherry red heat. Round, Square and Hexagon Bars for Bolt Forgings, Pump Piston Rods, Yacht Shafting, Etc. Spring Wire, Rolled Sheets and Plates for Pump Linings and Condenser Tube Sheets, Centerboards; Fin Keels and Rudders.

Ansonia Brass and Copper Co.,

SOLE MANUFACTURERS. 19-21 CLIFF ST., NEW YORK. SEND FOR PAMPHLET,

GRAHAM'S RAPID FUELING DOCKS,



DETROIT RIVER, FOOT 21st STREET.

No interference from Passenger or Car Ferry Lines. Full supply of

BEST STEAM COAL

Always on hand. Wide stretch of river and plenty of water at dock. POCKETS AND CHUTES arranged for various types of vessels, allowing QUICK DISPATCH day or night.

JAMES GRAHAM, DETROIT.

THE CHASE MACHINE COMPANY,

MACHINISTS, ENGINEERS AND BLACKSMITHS,

MANUFACTURERS OF

Land & Marine Engines & Steam Pumps,

SOLE OWNERS AND MANUFACTURERS OF THE

CHASE AUTOMATIC FOG WHISTLE MACHINE.

IN USE ON NEARLY ALL LAKE STEAMERS.

Agents for Asbestos Steam, Boiler and Pipe Covering.

Telephone 994.

III Elm Street, CLEVELAND, G.

PINTSGH GAS LIGHTED BUOYS.

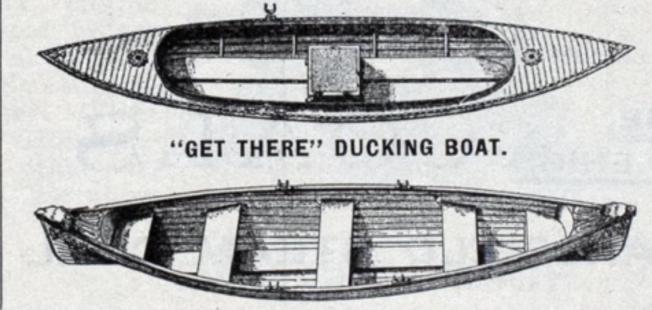
Adopted by the English, German, French, Russian, Italian and United States Light-House Departments for channel and harbor lighting; over 500 gas buoys and gas beacons in service.

BURN CONTINUOUSLY from 80 to 365 days and nights without attention, and can be seen a distance of six miles.

BRILLIANT AND STEADY ILLUMINATION. ECONOMICAL AND RELIABLE IN OPERATION.

Controlled by the SAFETY CAR HEATING AND LIGHTING CO.,

160 Broadway, NEW YORK CITY.



DOUBLE-ENDER PLEASURE BOAT.

NEW YORK,

PHILADELPHIA.

BOSTON,

BALTIMORE,

SAN FRANCISCO,

NEW ORLEANS.

HAVE NO RIVAL!

in appearance, durability, and staunchness

MULLINS' METAL BOATS

are superior in every way. Need no repairs. Low in cost. Send for catalogue.

W. H. MULLINS, 252 Depot St., Salem, O.

For sale by A. G. Spaulding & Bros., Chicago, John P. Burkhard, St. Paul, Minn., Simmons Hardware Co., St. Louis, Mo., H. C. Squires & Sons, New York. N. Y., Saks & Co.. Washing-

Johnson &

Average Adjusters....

AND

Fire of Marine Insurance.

SPECIAL FACILITIES FOR PLACING MARINE LINES.

GUARANTY BUILDING, BUFFALO, N. Y.

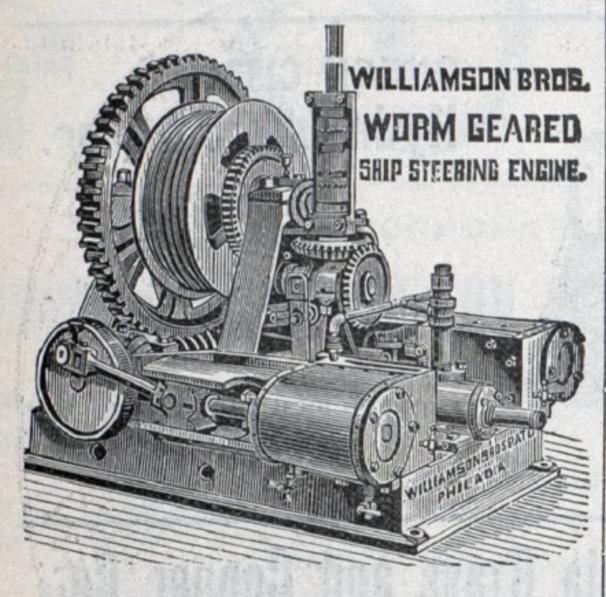


Traction Engines, Tugboats, &c. Thoroughly Reliable-Perfectly Automatic. JENKINS BROS., - Selling Agents, NEW YORK, BOSTON, PHILA., CHICAGO.



Cor. Richmond and York Sts.,

PHILADELPHIA - PA.



HOISTING ENGINES and SHIP STEERING ENGINES.

With either Frictional, Spur or Worm Gear of Various Patterns to Suit all Purposes.

ESTABLISHED 1871.

INCORPORATED 1893.

MONTAGUE, MIOH.

Marine and Stationary Engines

AND BOILERS OF ALL KINDS.

Prices Quoted on Application. Heavy Castings a Specialty. Fore and Aft Compound Marine Engines.

The Engines in the following boats are of our manufacture.

Tug, Hunter, Chicago, 15 and 28x22.

Tug, Tacoma, Chicago, 16 and 30x24.

Tug, Zenith, Duluth, 18 and 36x30.

Steamer Glenn, South Haven, 14 and 28x20.

U. S Survey Steamer, W. S. Hancock 12 and 21x20.

Steamer Pine Lake, Charlevoix, 16 and 30x24.

Passenger Steamer Pilgrim, St. Clair, 14 and 28x20.

Steam Barge Iona, Grand Haven, 24 and 46x42.

Steam Barge M. T. Greene, Chicago, 20 and 36x36.

Steamer H. W. Williams, South Haven, 18 and 36x30.

Steam Barge Mark B. Covell, Manistee, 18 and 30x26.

Steam Barge Isabella J. Boyce, Michigan City, 19 and 32x26. and 32x26. Steam Barge Luella H. Worthington, Cedar River,

Passenger Steamer City of Kalamazoo, South Haven,

20 and 40x30. Steamer Oval Agitator, Chicago, 14 and 28x20.

Tug E. G. Crosby, Muskegon, 16 and 30x24.

Tug Peter Coates, Sault Ste. Marie, 10 and 20x16.

Steamer Lorain L, South Haven, 12 and 21x16.

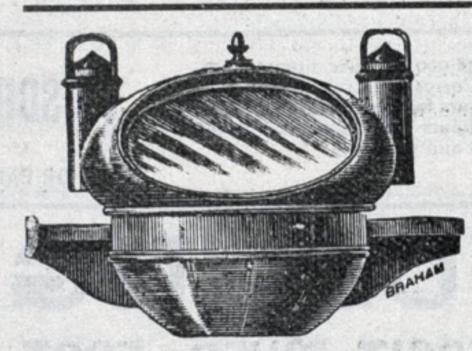
Passenger Steamer Lotus, Escanaba, 16 and 30x24.

Steam Barge Sachem, Grand Haven, 21 and 38x36. Passenger Steamer Bon Ami, Saugatuck, 14 and 28x20 Steam Barge Charles A. Street, Chicago, 20 and 36x36 Steam Barge Edward Buckley, Manistee, 18 and 36x30 Passenger Steamer E. G. Maxwell, Pentwater, 14 and 28x20.

Passenger and Freight Steamer Bon Voyage, Saugatuck, 16 and 30x26.

Passenger and Freight Steamer Mabel Bradshaw, Muskegon, 16 and 28x26. The engraving represents our 20 and 36x36 Fore and Aft Compound Marine Engine. We build them all sizes and guarantee them to give satisfaction. Prices furnished on application.

MONTAGUE IRON WORKS CO., Montague, Mich.



FRANK MORRISON, COMPASS ADJUSTER

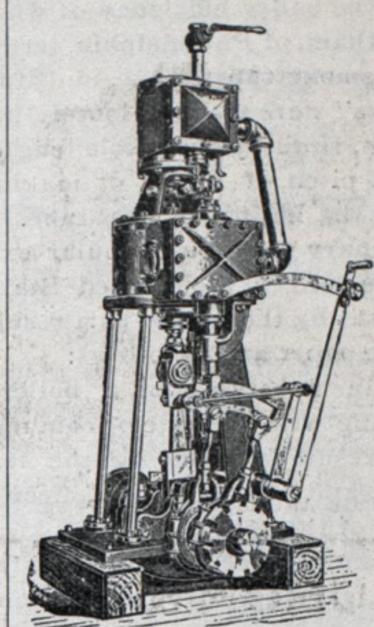
NAUTICAL INSTRUMENTS.

COMPASSES. BAROMETERS, PATENT LOGS, BINNACLES, STEAM GAUGES, MARINE GLASSES, ENGINE INDICATORS.

All Nautical Instruments Carefully Repaired.

Office with Upson, Walton & Co., 161 River St., Cleveland, O.

MARINE ENGINES



SINGLE AND COMPOUND.

5 TO 200 HORSE-POWER. These engines are high-class workmanship and material and moderate in price. Send for cuts, description and prices.

Centrifugal Pumps

For raising coal, sand, &c. For dredging, wrecking and circulating. Write for catalogue.

MORRIS MACHINE WORKS,

Baldwinsville, N. Y.

HENION & HUBBELL, Agents,

61-69 North Jefferson St., Chicago, III.

ABRAM SMITH.

ANGUS H. SMITH.

ABRAM SMITH & SON,

SHIP-BUILDERS,

ALGONAC, MICH.

Wooden Ships of any description built rebuilt, or repaired.

Send for specifications, prices, etc. Good slips for laying up boats.

JEFFERY'S MARINE GLUE

Can be Obtained from the Following Well-known Firms

L. W. Ferdinand & Co., Boston, Mass. Howard H. Baker & Co., Buffalo, N. Y. Geo. B. Carnenter & Co., Chicago, III. H. D. Edwards & Co., Detroit, Mich. Upson-Walton Co., Cleveland, O. M. I. Wilcox Cordage and Supply Co., Toledo, O.

Send for Circulars and Samples.

THE W. L. SC?TTCO.

WHOLESALE DEALERS IN

SHAMOKIN. WILKESBARRE, AND HAZLETON LEHIGH

.... MANSFIELD STEAM COAL

Fueling Steam Vessels a Specialty.

strand annual dison that's

U BAR TELY, Supt., Escapani.

Dock and Office at Canal Dock.

Either from Dock or Steam Scow Mansfield, capacity 300 tons, in buckets, which gives quick dispatch. Boats coaled day or night. Docks lighted with electricity and equipped with Steam Derricks.

ERIE, PA.

The GUDDY-MULLEN COAL CO., Cleveland

DEALERS IN BEST GRADES OF STEAM COAL.

SPECIAL ATTENTION GIVEN TO STEAMBOAT FUELING.

SHIPPING DOCK with Car Dumping Machine, also eight chutes holding 100 tons each, for Rapid Fueling within Eastern Arm of Breakwater, Cleveland.

Steam Lighters Carrying Derricks and Large Buckets in operation day and night within Cleveland Harbor. Pocket dock at Sandwich on Detroit River, formerly owned by Mullen & Gatfield.

Pocket dock now under construction on Sault River.

Main Offices, Perry-Payne Bldg., Cleveland, O. Telephone No. 8.

RIVER DOCK, West River Street. Telephone 1441.

ROBERT E. HILLS,

Steam Fitting and Heating,

Wrought Iron Pipe and Fittings, Engineers' Supplies; General Jobbing Work Done Promptly.

Also Proprietor of North Side from Works.

57 & 59 North Wells St. CHICAGO, ILL.



Handicapped

SOME BOATS ARE BADLY HANDICAPPED FOR WANT OF THE RIGHT KIND OF

FUEL

We have the right kind at our Amherstburgh Dock, and will take good care of your wants if you will give us a chance.

> O. W. SHIPMAN. Office, 90 Griswold Street, DETROIT, MICH.

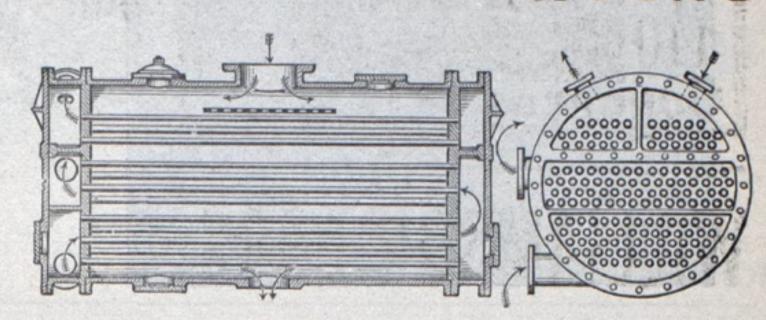
Wheeler Condenser & Engineering Co.,

WHEELER'S IMPROVED SURFACE CONDENSERS Mounted upon Combined Air and Circulating Pumps.

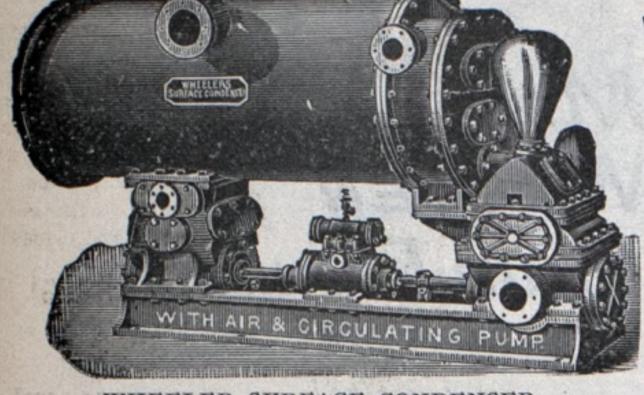
EDMISTON PATENT FEED WATER FILTER.

Sole Proprietors and Manufacturers of the WHEELER STANDARD SURFACE CONDENSER. WHEELER ADMIRALTY SURFACE CONDENSER. WHEELER LIGHT HALL SURFACE CONDENSER. VOLZ PATENT COMBINED SURFACE CONDENSER AND FEED-WATER HEATER. WHEELER FEED-WATER HEATER, AIR AND CIRCULATING

Send for Pamphlet, "Machinery for Small Boats, etc."



PATENT COMBINED SURFACE CONDENSER AND FEED-WATER HEATER.



WHEELER SURFACE CONDENSER, Mounted on Combined Air and Circulating Pumps.

P.M. CHURCH & CO.

SAULT STE. MARIE, MICH.,

Ship Chandlery, Hardware, Paints, Oils,

And all classes of VESSEL SUPPLIES.

Coppersmith Shop in connection.

Corner Portage and Ashmun Sfs.

TELEPHONES;

OFFICE NO. 7. RESIDENCE NO. 4.

EIGHT ELEGANT PHOTOGRAVURES

SIZE, 10 x 17 INCHES.

Whaleback Steamer Christopher Columbus, STATE OF OHIO-STATE OF NEW YORK,

Steel Ship Builders,

Steamer ARTHUR ORR,

English-Built Steamer TURRETT,

Dry-Dock Representatives,

Schooner JOHN FITZPATRICK.

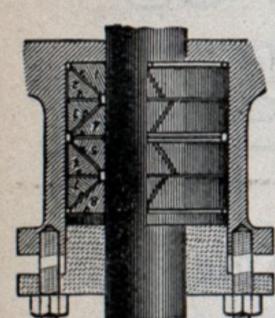
Complete set mailed to any address on receipt of 25 cents.

THE MARINE RECORD,

Western Reserve Bldg.,

CLEVELAND, O.

Katzenstein Self-Acting Metal Packing



for Piston Rods, Valve Stems, Etc., of every description, for Steam Engines, Pumps, Etc. Adopted and in use by the principal Iron Works, Steamship Companies, Mills and Engine Builders, Electric Light and Power Plants within the last twelve years in this and foreign Councies. Also FLEXIBLE FUBULAR METALLIC PACKING for Slip-Joints on Steam Pipes and for Hydraulic Pressure. Also METAL GASKETS for all sizes and shapes of flanges. Double-Acting Balanced Water-tight Bulkhead Doors for Steamers. Also Agents for the McColl-Cumming Patent Liquid Rudder Brake.

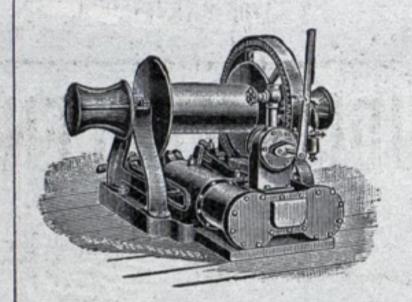
L. KATZENSTEIN & CO.. General Machinists, Brass Finishers and Engineers' Supplies, 357 West Street, NewYork, N.Y. Etc., of every description,



There are poorly made imitations of our rotator. Buy only the Buss Adjustable Rotator, stamped our name and patents. For sale by Ship Chandlers. JOHN BLISS & CO.

39 & 41 CORTLANDT STREET, NEW YORK.

128 Front Street, NEW YORK



Dock and Deck Hoists.

ALL KINDS OF

Machinery and Friction Hoists. JACKSON & CHURCH, Saginaw, Mich.

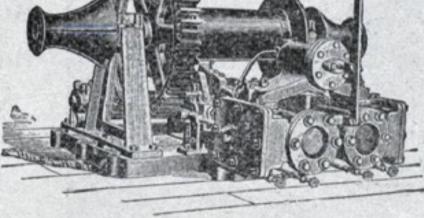
Send for Prices ., and Circulars.

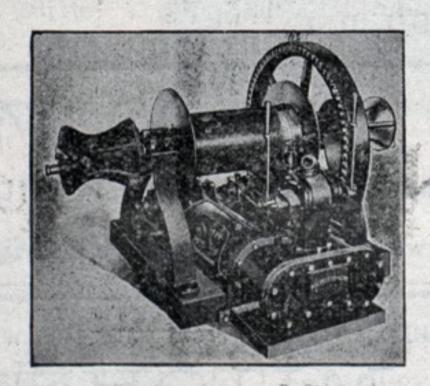


We build them in all sizes from new and improved designs. Every engine thoroughly tested before leaving our shop, and guaranteed to be satisfactory in every case. When &. in want of a Hoist for

marine work, dock work, mining or any other purpose, kindly permit us to name you prices. We know we can please you.

MARINE IRON CO.,





DECK HOISTS

Coal and Contractors' Hoists, Steam Steering Gears and Conveying Machinery For all Purposes.

MANUFACTURED BY W. H. WHITTEMORE, WRITE FOR PRICES. WEST BAY CITY, MICH.

BAY CITY, MICH

342 Swan St., -

U. S. Hydrographic Office Charts BOOKS OF SAILING DIRECTIONS, ETC.

GATALOGUE FREE

W. E. REDWAY,

(Elected Member of the Institution of

Naval Architects at London in 1884.)

CONSULTING ENGINEER,

IN STEEL, COMPOSITE

ALL KINDS OF VESSELS DESIGNED.

Inspection and valuation of repairs

made. Construction of new, and repair

of damaged vessels superintended, Sur-

veys, es'imates and specifications fur-

nished promptly.

BUFFALO, N. Y.

OR WOOD.

PRACTICAL SHIPBUILDER

NAVAL ARCHITECT.

Are for sale at the office of

THE MARINE RECORD,

Western Reserve Bldg., CLEVELAND, O.

J.J. KEENEN, RIVERSIDE STEAM BOILER WORKS.



Marine, Locomotive and Stationary Boilers. Marine Work a Specialty.

SHEET IRON WORK OF ALL KINDS. REPAIRING PROMPTLY ATTENDED TO.

Office and Works, Cor. Cologne and Fuller Streets,

Telephone, Canal 401____

CHICAGO.

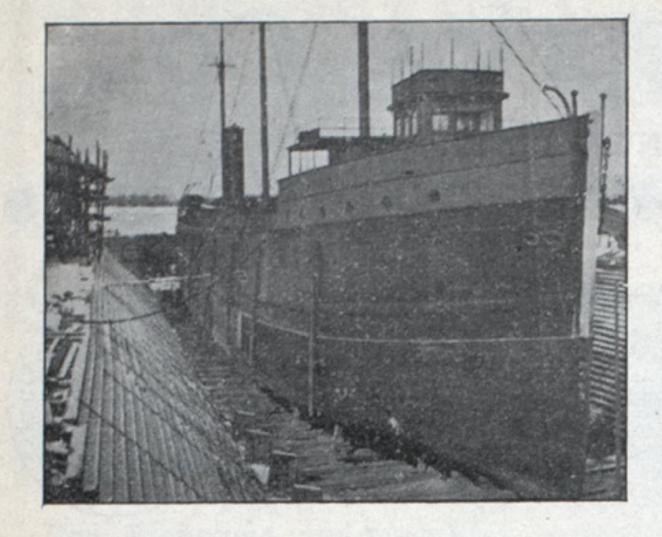
J. H. OWEN, Prest., Chicago. F. H. VAN CLEVE, Sec'y, Escanaba. Capt. GEO. BARTLEY, Supt., Escanaba.

ESCANABA TOWING & WRECKING CO., Escanaba, Mich.

Tugs, Lighters, Steam Pumps, Hawsers, Hydraulic Jacks and Diving Appliances always ready TUG MONARGH-Engine Compound, Cylinder 16 & 30 in. diameter, 30 in. Stroke, Steam Pressure allowed, 125 lbs.

TUG DELTA-Cylinder 20 by 22. Steam Pressure allowed, 105 lbs. TUG OWEN-Cylinder 20 by 20, Steam Pressure allowed, 104 ll s-

CENTRIFUGAL PUMPS. SEVEN AND FOURTEEN INCH SUCTION



CRAIG SHIP BUILDING CO.,

TOLEDO, OHIO

New Dry-Dock 450 feet long, 110 feet wide on top, 55 feet wide on bottom, 16 feet water on sill.

METAL ANDWOODEN SHIP BUILDERS.

Repairs to Metal and Wooden Ships A Specialty.

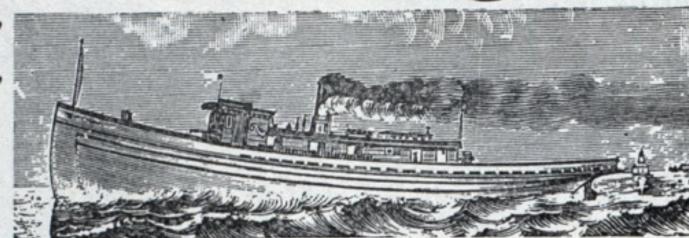
H. A. HAWGOOD, Pres't. PHILIP MINCH, Vice-Pres't.

C. A. MORGAN, Gen'l Mang'r.

J. A. SMITH, Sec'y. J. R. SPRANKLE, Treas.

The Cleveland Tug Company,

First-class Tugs, Steam Pumps, Divers, Hawsers, Lifting Screws, Etc., furnished Promptly on Orders by Telegraph or otherwise.



Steamers when outside wanting our Tugs, blow one long whistle and as many short ones as they want tugs.

OPEN DAY and NIGHT. Long Distance Telephone 725. AFOFFICE 23 RIVER ST. Cleveland, Ohio.

The "CINCINNATI" Automatic STEAM STEERING GEAR

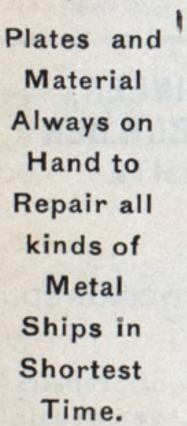
Send for Circular. Simple, Powerful Machine. Noiseless and Sure. FRONTIER IRON WORKS, Detroit, Mich., AGENTS FOR THE LAKES.

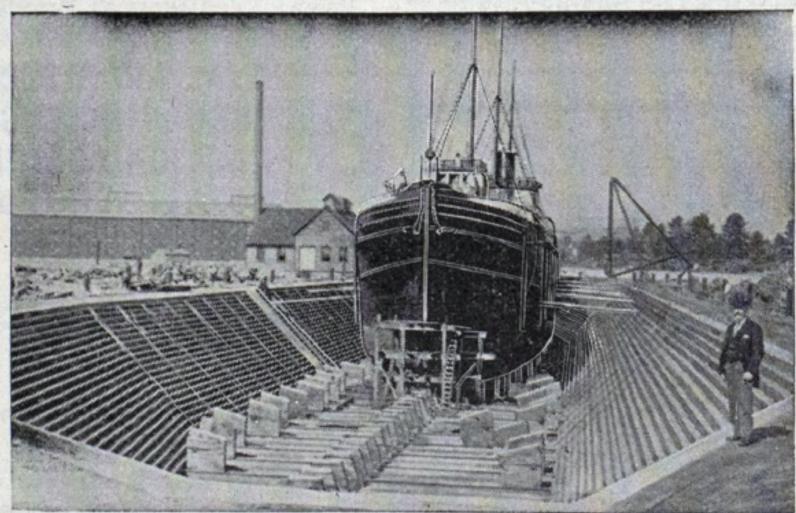
AMERICAN STEEL BARGE CO. STEEL AND METAL SHIPS

OF ALL CLASSES BUILT ON SHORTEST POSSIBLE NOTICE AT OUR YARDS AT

WEST SUPERIOR, WIS., and also at EVERETT, WASH.

PHOTOGRAPH OF 300 FT. BOAT IN DOCK.





Quality of Oak in Stock for Repairing Wooden Vessels of all Classes.

Best

SIZE OF DOCK.

Length, Extreme......537 feet.

Entrance, Top,......55 feet 9 in. Entrance, Bottom......50 " Depth over Sills......18 "

LARGEST DRY DOCK ON THE LAKES.

PRICES FOR REPAIRS AND DOCKING SAME AS AT LOWER LAKE PORTS.

SUPERIOR, WIS.

A NUMBER OF PROPELLER WHEELS IN STOCK AT DRY DOCK.

A. GILMORE'S SONS.



EAST SIDE, NEAR IRONVILLE.

TOLEDO, O.

Dimensions of Dock, 236 feet long, 55 feet wide at top and 37 feet wide at gate. Nine feet water over sill.

RATES OF DOCKING, Ten Cents per Registered Gross Ton for Vessel over 200 Tons. Jig Mill and Planer in connection with Dock. PHONE NO. 157.

Superior Graphite Paint Paint your Vessels with NO BLISTERING, CRACKING OR SCALING.

Made especially for Stacks, Decks, Sides, Hulls and Water Compartments.

Strictly anti-rust, and most durable and economical.

DETROIT GRAPHITE MFG. CO.

542 River St., Detroit, Mich.

WHITTON & BATES, Agents, 503 Perry-Payne Building, Cleveland, O.

THE SHIP OWNERS DRY DOCK CO.

Largest DOCK YARD on the GREAT LAKES.

Capacity with Two Docks to Dock the Largest Ships on

the Lakes.

GENERAL REPAIR WORK PROMPTLY ATTENDED TO.

Being equipped with Lucigen Lights we do work at night as well as day. Foot of Weddell Street, CLEVELAND, O. TELEPHONE 1635.

C. A. MACDONALD & CO.,

GENERAL MARINE INSURANCE AGENTS.

RIALTO BUILDING,

CHICAGO, ILL.

THOS. WILSON,

MANAGING OWNER WILSON'S TRANSIT LINE,

General Forwarder, Freight and Vessel Agent.

CLEVELAND, O.

JOHN MITCHELL.

JOHN F. WEDOW.

ALFRED MITCHELL.

MITCHELL & CO., VESSEL AND INSURANCE AGENTS.

Office Telephone, 767. Residence John Mitchell, 'Phone 3506.

508-509-110 Perry-Payne Bldg., CLEVELAND, O.

C.R.JONES & CO.,

VESSEL AGENTS.

FIRE AND MARINE INSURANCE.

Nos. 501, 502 and 503 Perry-Payne Bldg., CLEVELAND, O.